

Historic, Archive Document

Do not assume content reflects current scientific knowledge, policies, or practices.



2 HD 1491
F1454

C2



United States
Department of
Agriculture

Agricultural
Cooperative
Service

ACS Research
Report
Number 81

Farmer Cooperatives: Commercial Farmers Members and Use



Farmer Cooperatives: Commercial Farmer Members and Use

Charles A. Kraenzle, Roger A. Wissman, Thomas Gray,
Beverly L. Rotan, and Celestine C. Adams

Agricultural Cooperative Service
U.S. Department of Agriculture

Seventy-eight percent of commercial farmers were either members or nonmember patrons of marketing/farm supply cooperatives in 1986 compared with more than 76 percent in 1980. From 1980 to 1986, the percentage of commercial farmers who were members of cooperatives increased from 65 to 66 percent. Nonmember patrons held steady at 12 percent. The biggest change was an increase in percent of members among commercial farmers with sales of \$500,000 and over. Members among this group increased from 56 percent in 1980 to 69 percent in 1986. The percentage of commercial farmers with multiple memberships increased and the percentage of farmers with inactive memberships decreased. The percentage using cooperatives for marketing and for purchasing increased. Forty-nine percent used a cooperative for marketing, and 71 percent used a cooperative to purchase farm supplies in 1986. Data for the study were obtained from surveys by the National Agricultural Statistics Service (formerly Statistical Reporting Service), U.S. Department of Agriculture.

Keywords: Farmer cooperatives, marketing cooperatives, farm supply cooperatives, cooperative members, commercial farmer.

Preface

This study describes some major characteristics of commercial farmer members of marketing and farm supply cooperatives in 1986 and changes since 1980. It was conducted to determine changes in number of commercial farmer members and use of cooperatives since 1980. The purpose of the study was to further research and education, and to aid cooperative leaders and others in developing cooperative programs to better serve farmers. It provides information on commercial farmer members, number and percentage of commercial farmer members and nonmembers using cooperatives for marketing and purchasing activities, multiple memberships, inactive members, nonmember nonpatrons, and level of cooperative usage in marketing and purchasing major farm supplies. Information is presented by region, farm type, farm size, and operator's age.

The study focuses on commercial farm operators, 640,000 in 1980 and 593,000 in 1986, who used cooperatives as members or nonmember patrons. It excludes all others engaged in farming and holding cooperative membership. Also excluded are those holding membership but who were retired or not farming at the time of the survey. Landlords who rented farmland on a share basis and held cooperative memberships because they marketed their share of farm production through or purchased their share of farm supplies from cooperatives are also excluded (see appendix).

An earlier report (ACS Research Report 77) presents information on all farmers.

The authors wish to acknowledge the cooperation of the National Agricultural Statistics Service (NASS) in collecting and assembling information for this study.

Contents

Highlights.....	iii
Overview	1
Members and Nonmember Patrons	4
Multiple Memberships	11
Distribution of Members	12
Use of Marketing Cooperatives	14
Members	14
Farmers	14
Use of Farm Supply Cooperatives	18
Members	18
Farmers	18
Inactive Members.....	23
Nonmember Patrons	23
Held Membership in Another Cooperative.....	23
Held No Cooperative Membership.....	24
Nonmember Nonpatrons.....	25
Commercial Farmers' Use of Cooperatives	
for Products Marketed	26
Commercial Farmers' Use of Cooperatives	
for Farm Supplies Purchased	29
Conclusions and Implications.....	31
Other Publications.....	32
Appendix	33
Survey Description	33
Definitions.....	33
Appendix Tables	34

Seventy-eight percent of all commercial farmers were involved with cooperatives either as members or nonmembers in 1986 compared with more than 76 percent in 1980. Members increased from 65 to 66 percent; nonmember patrons held steady at 12 percent. Major changes were an increase in percent of members among the largest farm operators and an increase in percent of commercial farmers who used farm supply cooperatives.

These major findings came from data collected through a national survey of farmers. Survey results for commercial farmers provided some positive implications for cooperatives, but identified some areas of concern.

Other major findings included:

- Number of commercial farms dropped 7.3 percent while commercial farmer members declined only 5.3 percent.
- At least 75 percent of the commercial dairy, cash grain, and livestock farmers were involved with cooperatives. Among commercial dairy farmers, it was 91 percent.
- A larger percent of commercial farmers held multiple memberships--37 percent in 1986, compared with 35 percent in 1980.
- Three of eight regions, Corn Belt, Lake States, and Northern Plains, accounted for 59 percent of the commercial farms and 64 percent of commercial farmer members.
- The proportion of commercial farmers who used cooperatives for marketing increased slightly, from 48 to 49 percent. Increased use of cooperatives among the largest farmers was a contributing factor.
- Forty-five percent of commercial farmers who marketed through a cooperative marketed almost all of their products through a cooperative. Sixty-eight percent who marketed their principal product through cooperatives marketed almost all of it through cooperatives.
- The proportion of commercial farmers who used cooperatives for purchasing farm supplies rose from 64 percent in 1980 to 71 percent in 1986. The increase was the result of more commercial livestock and "other" farmers using cooperatives.
- A substantial drop in inactive members occurred, from 8.3 percent of commercial farmers in 1980 to 2.3 percent in 1986.
- Nearly 131,000 commercial farmers (22 percent) neither held membership in nor patronized a cooperative in 1986. Nearly 86 percent of these farmers had annual gross farm sales of \$40,000 to \$249,999. Only 5 percent reported sales of \$500,000 or more.
- Commercial farmers who used cooperatives for farm supplies purchased most of their fertilizer, chemicals, and petroleum from cooperatives. They were less likely to purchase most of their seed and feed from cooperatives.

Farmer Cooperatives: Commercial Farmer Members and Use

Charles A. Kraenzle
Roger A. Wissman
Thomas Gray
Beverly L. Rotan
and Celestine C. Adams ¹

OVERVIEW

Cooperatives are generally organized to serve the needs of farmers who use them. A cooperative's structure and operation depends upon the cooperative's leaders understanding of farmers' needs, and the cooperative's members' commitment to the cooperative way of doing business.

If cooperatives are to be structured and operated to maximize the benefits provided to members, it is important that cooperative leaders know as much as they can about patrons, both members and nonmembers. For example, what changes have taken place in number and type of commercial farms that have affected use of cooperatives? Do commercial farmers patronize cooperatives less as they get older? What characterizes those commercial farmers who are nonmember nonpatrons of cooperatives? This study addresses these and other questions.

To begin, however, it's important to look briefly at the number of commercial farms (\$40,000 or more in annual gross sales) and agricultural cooperatives in the United States and some of the changes from 1980 to 1986.

In 1986, more than 593,000 farms, or 27 percent, of all farms were commercial, compared with more than

640,000 or 26 percent in 1980. In 1986, nearly 35 percent of the commercial farms were cash grain; 25 percent, livestock; 23 percent, dairy; and 17 percent, "other." ²

From 1980 to 1986, the number of commercial farms dropped 7.3 percent, compared with a 9.7 and 9.1 percent decline in noncommercial and all farms, respectively. Most of the decrease in the number of commercial farms came from a decline in cash grain farmers and among commercial farmers in two of the four size groupings (table 1).

In 1986, commercial farms accounted for 85 percent of total gross farm income and 80.2 percent of total production expenses--both up from 1980. The largest farms (\$500,000 or more in sales) in 1986 accounted for nearly 6 percent of commercial farms, 31.3 percent of gross farm income, and 26.5 percent of total production expenses (table 2).

Agriculture went through difficult economic times from 1980 to 1986. This was partly reflected by the decline in net cash flow from \$37.6 billion in 1980 to \$30.9 billion in 1986 and the decline in farm assets from \$1,102.3 billion in 1980 to \$789.4 billion in 1986. ³

Decreased farm exports, low commodity prices,

¹ Charles A. Kraenzle, director, Statistics and Technical Services Staff (STSS); Roger A. Wissman, agricultural economist; Thomas Gray, rural sociologist; and Beverly L. Rotan, economist, Cooperative Services Division; and Celestine C. Adams, agricultural statistician, STSS.

² "Other" farms includes those producing tobacco, cotton, other field crops, vegetables, fruits and nuts, poultry, and miscellaneous products.

³ USDA, Economic Indicators of the Farm Sector: National Financial Summary, 1986, Agriculture and Rural Economy Division, Economic Research Service, ECIFS 6-2, December 1987, p. 8.

Table 1—Number of commercial farms, 1980 and 1986

Category	Farms		Percent change ¹
	1980	1986	
- -Thousands- -			
Region: ²			
Northeast	47	41	-11.1
Southeast	71	65	-7.8
Lake States	95	94	-.4
Corn Belt	196	159	-18.6
Northern Plains	90	98	-9.2
South Central	59	60	2.4
Mountain	38	36	-5.0
Pacific	46	39	-15.9
Farm type:			
Cash grain	243	206	-15.3
Dairy	140	138	-1.4
Livestock	156	148	-4.9
Other	102	102	-.1
Farm size:			
\$ 40,000 - \$ 99,999	355	289	-18.8
\$100,000 - \$249,999	181	214	18.1
\$250,000 - \$499,999	80	58	-28.0
\$500,000 or more	24	33	39.7
Commercial farms ³	640	593	-7.3

¹Based on number of commercial farms before rounding to thousands.

²See figure 1 for the States in each region and appendix table 1 for number of farms by region, type, and size.

³Totals may not add due to rounding.

decreased land values, and other changes forced many to leave the farm. Those who stayed had to change their method of operation in order to cut costs and improve farm income.

The number of farmer cooperatives as well as cooperative business volume also declined during this period:

Year	Cooperatives	Cooperative business volume		
		Marketing	Farm supply	Related services
	<i>Number</i>	<i>Bil. dol.</i>		
1980	6,293	48.9	16.1	1.2
1986	5,369	41.5	15.1	1.8

The drop was the result of cooperatives going out of business, mergers, and consolidations.

Cooperative business volume that excludes intercooperative business totaled \$66.2 billion in 1980 and \$58.4 billion in 1986.

Most farm products marketed by cooperatives in 1986 were milk, grain and soybeans, fruits and vegetables, and livestock. These accounted for 83 percent of the total net volume. Major farm supply sales were petroleum products, fertilizer, and feed, accounting for nearly 72 percent of the total. ⁴

From 1980 to 1986, cooperative marketing volume dropped 14.5 percent, farm supply sales declined 6.4 percent, and income from related services increased 45.6 percent. Overall, cooperative net business volume decreased 11.5 percent. Seventy-one to 74 percent of total business volume handled by cooperatives came from marketing farm products.

⁴ Ralph Richardson and others, Farmer Cooperative Statistics, 1986, ACS Service Report No. 19, Agricultural Cooperative Service, U.S. Department of Agriculture, Washington, D.C., December 1987.

Table 2—Gross farm income and total production expenses for commercial and smaller farms, 1980 and 1986

Category	1980	Percent of all farms	1986	Percent of all farms
Gross farm income ¹				
<i>Commercial farms:</i>	<i>Mil. dol.</i>	<i>Percent</i>	<i>Mil. dol.</i>	<i>Percent</i>
\$ 40,000 to \$ 99,999	27,935	18.0	23,675	14.6
\$100,000 to \$249,999	28,366	18.2	37,632	23.1
\$250,000 to \$499,999	29,459	18.9	26,074	16.0
\$500,000 or more	42,232	27.1	51,015	31.3
Total	127,992	82.3	138,396	85.0
Less than \$ 40,000	27,582	17.7	24,412	15.0
All farms	155,574	100.0	162,808	100.0
Total production expenses				
<i>Commercial farms:</i>	<i>Mil. dol.</i>	<i>Percent</i>	<i>Mil. dol.</i>	<i>Percent</i>
\$ 40,000 to \$ 99,999	25,807	19.4	19,422	15.9
\$100,000 to \$249,999	24,147	18.1	28,219	23.1
\$250,000 to \$499,999	23,813	17.9	17,903	14.7
\$500,000 or more	30,076	22.6	32,319	26.5
Total	103,843	78.0	97,863	80.2
Less than \$ 40,000	29,295	22.0	24,189	19.8
All farms	133,138	100.0	122,052	100.0

¹Includes cash receipts, net Commodity Credit Corporation loans, direct Government payments, other farm-related income, the value of home consumption, and gross rental value of farm dwellings.

Source: USDA, *Economic Indicators of the Farm Sector: National Financial Summary, 1986*. Agriculture and Rural Economy Division, ERS, USDA, ECIFS 6-2, Dec. 1987, pp. 40, 42.

MEMBERS AND NONMEMBER PATRONS

More than 390,000, or 66 percent, of the commercial farm operators ⁵ held membership in one or more marketing and/or farm supply cooperatives in 1986--down 23,000 from 1980. Collectively, these commercial farmers held nearly 775,000 memberships, for an average of 2 memberships each. Another 72,000, or 12 percent of commercial farmers, used these cooperatives as nonmember patrons--a decrease

of 4,000 since 1980.

Consequently, nearly 463,000 or 78 percent of commercial farmers in 1986 were either members or nonmember patrons of at least one marketing or farm supply cooperative--a net decline of 5.5 percent from 1980. However, the overall percent of commercial farmers as either members or nonmember patrons was up slightly over this period.

The decline in number of cooperative members was related to the decline in number of commercial farms. Commercial cash grain farmers declined 15 percent while commercial cash grain members decreased 13 percent. Commercial livestock members even declined more than the percentage decline in number of commercial livestock producers. Among dairy and "other" farms, however, the number of members increased even though the number of farms

⁵ A farm operator is the principal member of a farming enterprise. In a partnership, the farm operator is the person making day-to-day decisions or the oldest partner if decisionmaking is shared equally. Generally, throughout this report, farm operators are called farmers.

Table 3—Change in number of commercial farms, members, and nonmember patrons, 1980 to 1986

Category	Farmers	Members	Nonmember patrons	Members and nonmember patrons
<i>Number¹</i>				
Region: ²				
Northeast	(5,188)	(3,868)	(1,760)	(5,628)
Southeast	(5,504)	(634)	(3,560)	(4,194)
Lake States	(360)	5,832	(3,035)	2,797
Corn Belt	(36,328)	(34,467)	2,031	(32,436)
Northern Plains	8,236	6,470	2,877	9,347
South Central	1,416	5,621	229	5,850
Mountain	(1,882)	1,830	19	1,849
Pacific	(7,328)	(3,600)	(976)	(4,576)
Farm type:				
Cash grain	(37,234)	(20,625)	(8,258)	(28,883)
Dairy	(1,956)	2,162	(2,563)	(401)
Livestock	(7,694)	(7,986)	6,751	(1,235)
Other	(54)	3,633	(105)	3,528
Farm size:				
\$ 40,000 - \$ 99,999	(66,635)	(37,417)	(8,513)	(45,930)
\$100,000 - \$249,999	32,780	21,627	4,141	25,768
\$250,000 - \$499,999	(22,472)	(16,497)	(1,090)	(17,587)
\$500,000 or more	9,389	9,471	1,287	10,758
Commercial farms	(46,938)	(22,816)	(4,175)	(26,991)

¹Parentheses indicate decrease.

²See figure 1 for the States in each region and appendix table 1 for number of commercial farms by region, type, and size.

declined (table 3). Overall, commercial farmer members declined 5.5 percent, compared with a 7.3 percent decrease in number of farms.

Among farmers with annual gross sales of \$100,000 to \$249,999 and at least \$500,000, the number of commercial farmer members increased. This may have been due to the increased number of farmers in these two size groupings. Among farmers with sales of at least \$500,000, the increase was greater than the increase in number of farmers. In fact, large-farm operators holding membership increased nearly 72 percent from 1980 to 1986 (table 4).

The decline in nonmember patrons among cash grain, dairy, and "other" farms was partially offset by increased nonmember patrons among livestock producers. Most of the decline in nonmember patrons was among the small commercial farmers. This group

also had the largest decline in number of farms.

Table 5 shows the percent of members and nonmember patrons in each region, farm type, and farm size for 1980 and 1986. The biggest percentage-point increases among commercial farmer members during this period were in the Mountain, South Central, and Lake States regions (fig. 1) and among farmers with gross sales of at least \$500,000.

The percent of commercial farmers who were nonmember patrons both in 1980 and 1986 was about the same.

Table 4—Number of commercial farmer members, 1980 and 1986

Category	Members		Percent change ¹
	1980	1986	
<i>- -Thousands- -</i>			
Region: ²			
Northeast	34	30	-11.4
Southeast	36	36	-1.7
Lake States	72	78	8.1
Corn Belt	130	96	-26.5
Northern Plains	70	76	9.3
South Central	25	31	22.3
Mountain	20	21	9.3
Pacific	26	22	-13.8
Farm type:			
Cash grain	159	139	-13.0
Dairy	112	114	1.9
Livestock	95	87	-8.4
Other	47	51	7.7
Farm size:			
\$ 40,000 - \$ 99,999	218	181	-17.2
\$100,000 - \$249,999	125	147	17.3
\$250,000 - \$499,999	57	40	-29.0
\$500,000 or more	13	23	71.8
Commercial farmer members ²	413	390	-5.5

¹Percent based on number of members before rounding to thousands.

²Totals may not add due to rounding.

Table 5—Members and nonmember patrons, 1980 and 1986

Category	Members		Nonmember patrons		Total ¹	
	1980	1986	1980	1986	1980	1986
<i>Percent in each category</i>						
Region:						
Northeast	73	73	13	10	86	83
Southeast	52	55	15	11	67	66
Lake States	76	83	11	8	87	91
Corn Belt	66	60	12	16	79	76
Northern Plains	78	78	9	11	86	89
South Central	43	51	13	13	56	64
Mountain	52	60	16	17	68	77
Pacific	56	58	8	7	64	65
Farm type:						
Cash grain	66	67	14	12	79	80
Dairy	80	83	10	8	90	91
Livestock	61	59	11	16	72	75
Other	46	50	12	12	58	62
Farm size:						
\$ 40,000 - \$ 99,999	62	63	13	13	75	76
\$100,000 - \$249,999	69	69	11	11	80	80
\$250,000 - \$499,999	71	70	9	10	79	80
\$500,000 or more	56	69	10	11	65	79
Operator's age:						
Under 36	—	65	—	14	—	80
36 to 54	—	65	—	12	—	77
55 or more	—	67	—	11	—	78
Total	65	66	12	12	76	78

¹Totals may not add due to rounding.

— = Data not collected for 1980.

Figure 1 - Commercial Farm Operators Reporting Memberships In Cooperatives

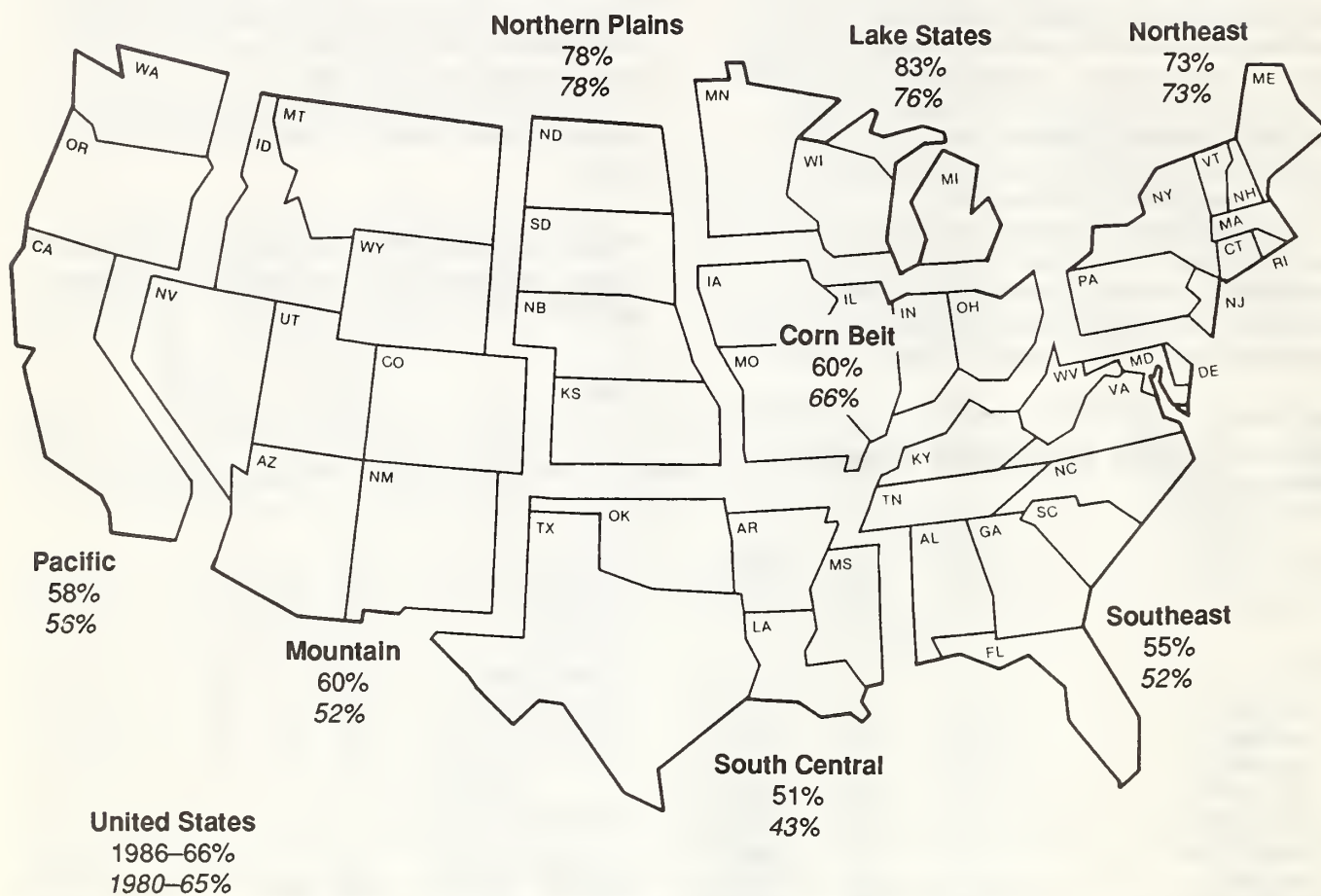


Table 6—Percentage of commercial farmers who held cooperative memberships, 1986

Category	Region								United States
	North-east	South-east	Lake States	Corn Belt	Northern Plains	South Central	Mountain	Pacific	
Percent in each category									
Farm type:									
Cash grain	58	54	78	57	81	60	77	70	67
Dairy	80	80	89	78	83	83	71	80	83
Livestock	63	49	87	60	70	40	48	34	59
Other	57	50	53	31	88	43	48	52	50
Farm size:									
(\$000)									
\$40 - 99.9	66	51	81	56	76	47	58	48	63
100 - 249.9	80	61	85	61	79	54	61	56	69
250 - 449.9	75	56	88	70	79	52	70	61	70
500 or more	78	47	72	70	83	69	44	73	69
Operator's age:									
Less than 36	70	44	80	61	71	48	58	57	65
36 to 54	70	52	85	60	77	52	57	57	65
55 or more	79	64	83	59	83	51	63	58	67
Total	73	55	83	60	78	51	60	58	66

In 1986, the Lakes States had the highest percentage of commercial farmers with memberships. The lowest percentage was in the South Central region; among "other" farms; and among the smallest commercial farmers (table 6).

The proportion of commercial farmers who either held membership or patronized cooperatives as nonmembers in 1986 ranged from 64 percent in the South Central region to 91 percent in the Lake States (fig. 2). Compared with 1980, the range moved upward.

In 1986, commercial dairy farms had the largest percentage of members on the small commercial farms.

On the other hand, commercial "other" farms accounted for the largest percentage of members on large farms (fig. 3).

Table 7 shows the percentage of commercial farmers who held cooperative memberships from 1980 to 1986 by farm type and farm size. The major change was the increased percentage of members among farmers with annual sales of \$500,000 or more. It was only among this size group that the percentage of commercial farmers who held cooperative memberships increased in each farm type.

Figure 2 - Percent of Commercial Farmers Who Were Members and Nonmember Patrons, by Region, 1986

Percent of farmers in each category

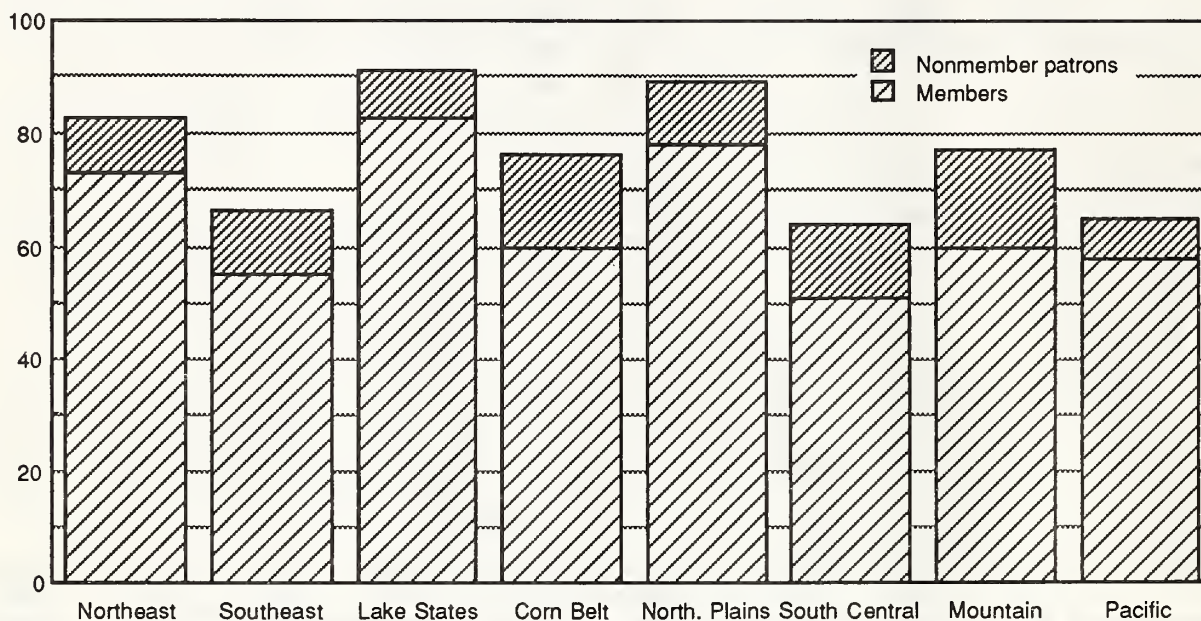


Figure 3 - Percentage of Commercial Farmers Who Held Cooperative Memberships, by Farm Size and Type, 1986

Percent of farmers in each category

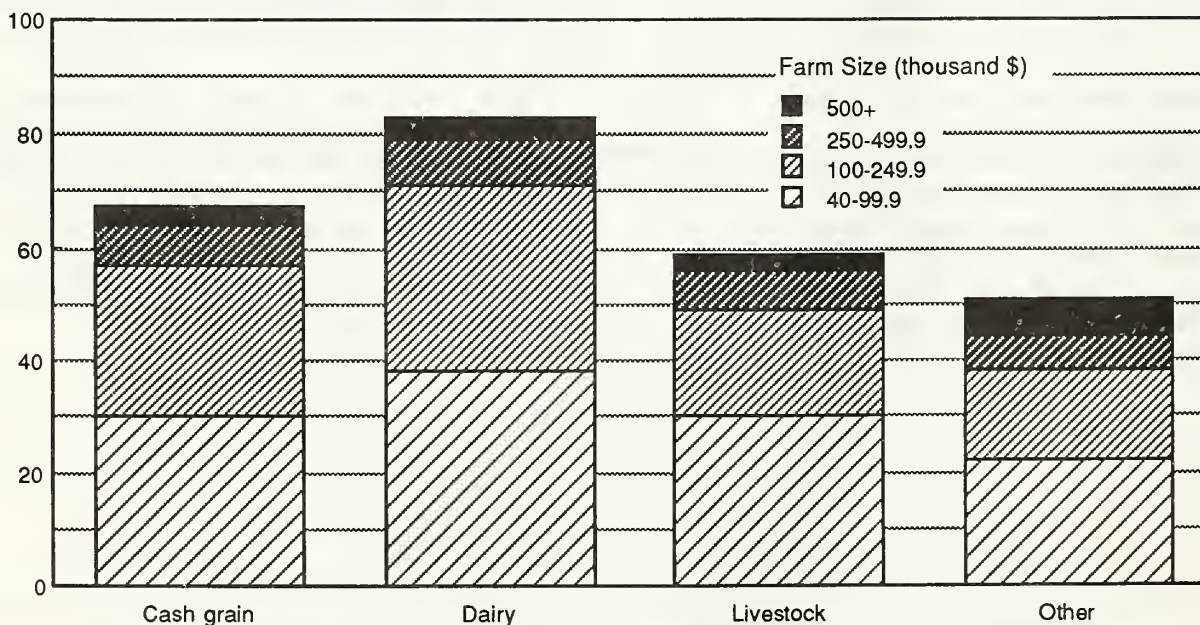


Table 7—Percentage of commercial farmers who held cooperative memberships, by farm type and size, 1980 and 1986

Farm size	Farm type								Commercial farms	
	Cash grain		Dairy		Livestock		Other			
	1980	1986	1980	1986	1980	1986	1980	1986	1980	1986
	Percent in each category									
\$ 40,000 - \$ 99,999	62	65	76	82	54	55	49	45	61	63
\$100,000 - \$249,999	69	69	86	84	69	61	47	52	69	69
\$250,000 - \$499,999	74	71	88	87	77	68	43	51	71	70
\$500,000 or more	64	74	68	77	59	60	39	65	56	69
Total	66	67	80	83	61	59	46	50	65	66

Table 8—Percentage of commercial farmers who held one or multiple memberships, 1986

Category	Memberships				
	One	Two	Three	Four or more	Two or more ¹
<i>Percent in each category</i>					
Region:					
Northeast	34	26	10	3	39
Southeast	33	16	5	1	22
Lake States	17	25	22	18	66
Corn Belt	34	17	7	2	26
Northern Plains	25	28	12	12	52
South Central	26	15	7	4	25
Mountain	35	13	6	5	24
Pacific	34	15	4	4	23
Farm type:					
Cash grain	33	19	9	7	35
Dairy	27	26	19	11	55
Livestock	26	21	7	5	33
Other	28	13	5	4	22
Farm size:					
\$ 40,000 - \$ 99,999	30	19	9	5	33
\$100,000 - \$249,999	27	22	11	9	42
\$250,000 - \$499,999	28	19	12	11	42
\$500,000 or more	37	14	11	7	32
Operator's age:					
Less than 36	27	19	13	6	38
36 to 54	28	19	10	8	37
55 or more	31	22	9	6	36
Total	29	20	10	7	37

¹Totals may not add due to rounding.

MULTIPLE MEMBERSHIPS

Farmers may hold memberships in more than one cooperative for a number of reasons. These include (1) the need to market through one cooperative and purchase farm supplies through another, (2) the marketing of different products through specialized cooperatives or through cooperatives especially equipped to handle a specific product, (3) the desire to take advantage of price both in marketing and purchasing, and (4) the desire to deal with certain people or take advantage of specific services offered.

In 1986, nearly 37 percent of all commercial farmers, or more than 218,000, held multiple memberships, compared with 35 percent, or 227,000, in 1980. The number of commercial farmers with memberships in two cooperatives declined, but increased for those having memberships in three or more. The largest decreases in multiple memberships were in the Corn Belt; among cash grain farmers; and those with annual gross sales of \$40,000 to \$99,999.

The percent of farmers who held one or more memberships in 1986 is shown in table 8. More than half of the commercial dairy farmers held multiple memberships.

In 1986, the largest number of multiple memberships was held among farmers in the Lake States and Northern Plains and among dairy farmers (table 9). In the Lake States, more than 79 percent of the members held multiple memberships. The greater number of multiple memberships in the Lake States and Northern Plains is likely related to the large number of cooperatives and dairy farmers in these regions. In 1985, the two regions accounted for 37 percent of the cooperatives in the United States (data for 1986 were not available).

Whatever reasons farmers have for holding multiple memberships in cooperatives begs the question of why cooperatives can't work together so farmers can obtain needed services through membership in one organization at least for marketing or purchasing activities. This is especially true for those areas with a large number of cooperatives.

Table 9—Commercial farmers with one or multiple memberships, 1986

Category	Memberships	
	One	Two or more
<i>Number</i>		
Region:		
Northeast	13,873	16,215
Southeast	21,653	14,129
Lake States	16,231	61,855
Corn Belt	53,879	41,705
Northern Plains	24,924	51,303
South Central	15,529	15,318
Mountain	12,756	8,726
Pacific	13,377	9,012
Farm type:		
Cash grain	66,961	71,592
Dairy	37,762	76,398
Livestock	38,633	48,122
Other	28,866	22,151
Farm size:		
\$ 40,000 - \$ 99,999	85,401	95,259
\$100,000 - \$249,999	58,402	88,458
\$250,000 - \$499,999	16,248	24,054
\$500,000 or more	12,171	10,492
Operator's age:		
Less than 36	33,139	46,386
36 to 54	79,931	103,474
55 or more	59,152	68,403
Total ¹	172,222	218,263

¹Totals may not add due to rounding.

DISTRIBUTION OF MEMBERS

The distribution of cooperative members changed slightly from 1980 to 1986 mainly because of the large decline of commercial cash grain farmers in the Corn Belt. In 1986, nearly 96,000 members (24.5 percent) were located in the Corn Belt compared with 130,000 members (31.5 percent) in 1980 (table 10). Also, the percentage of commercial farmers who held cooperative memberships as cash grain farmers dropped from 38.5 to 35.5 percent.

Commercial dairy farmers were the largest membership group in the Northeast and the Lake States. "Other" farms, which include tobacco and other field crops, were the largest membership group in the Southeast. Fruit and vegetable producers were an important part of "other" farms in the Pacific region. There, commercial "other" farms accounted for the largest membership group.

The Corn Belt, Lake States, and Northern Plains in 1986 accounted for 64 percent of commercial farmer members compared with 59 percent of the commercial farms (fig. 4). Most commercial farmer members (85 percent) had annual gross sales of \$40,000 to \$249,999.

The Lake States, Northern Plains, and Northeast regions had the largest percentage of commercial dairy farmer members. The percentage of "other" commercial farmer members was largest in the Pacific and Southeast regions (fig. 5).

Table 10—Distribution of commercial farmer members, 1980 and 1986

Category	Members	
	1980	1986
	<i>Percent</i>	
Region:		
Northeast	8.2	7.7
Southeast	8.8	9.2
Lake States	17.5	20.0
Corn Belt	31.5	24.5
Northern Plains	16.9	19.5
South Central	6.1	7.9
Mountain	4.8	5.5
Pacific	6.3	5.7
Farm type:		
Cash grain	38.5	35.5
Dairy	27.1	29.2
Livestock	22.9	22.2
Other	11.5	13.1
Farm size:		
\$ 40,000 - \$ 99,999	52.8	46.3
\$100,000 - \$249,999	30.3	37.6
\$250,000 - \$499,999	13.7	10.3
\$500,000 or more	3.2	5.8
Operator's age:		
Less than 36	—	20.4
36 to 54	—	47.0
55 or more	—	32.7
Total ¹	100.0	100.0

— = Data not collected for 1980.

¹Totals may not add due to rounding.

Figure 4 - Distribution of Commercial Farmers Who Held Cooperative Memberships, by Region and Farm Type, 1986

Percent of farmers in each category

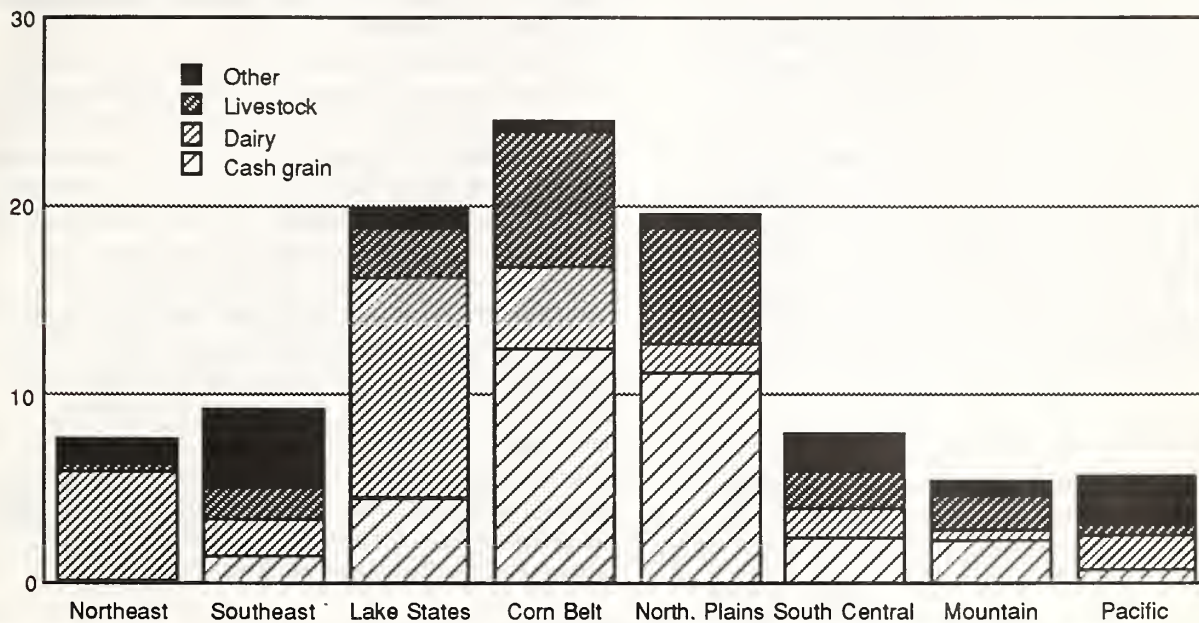
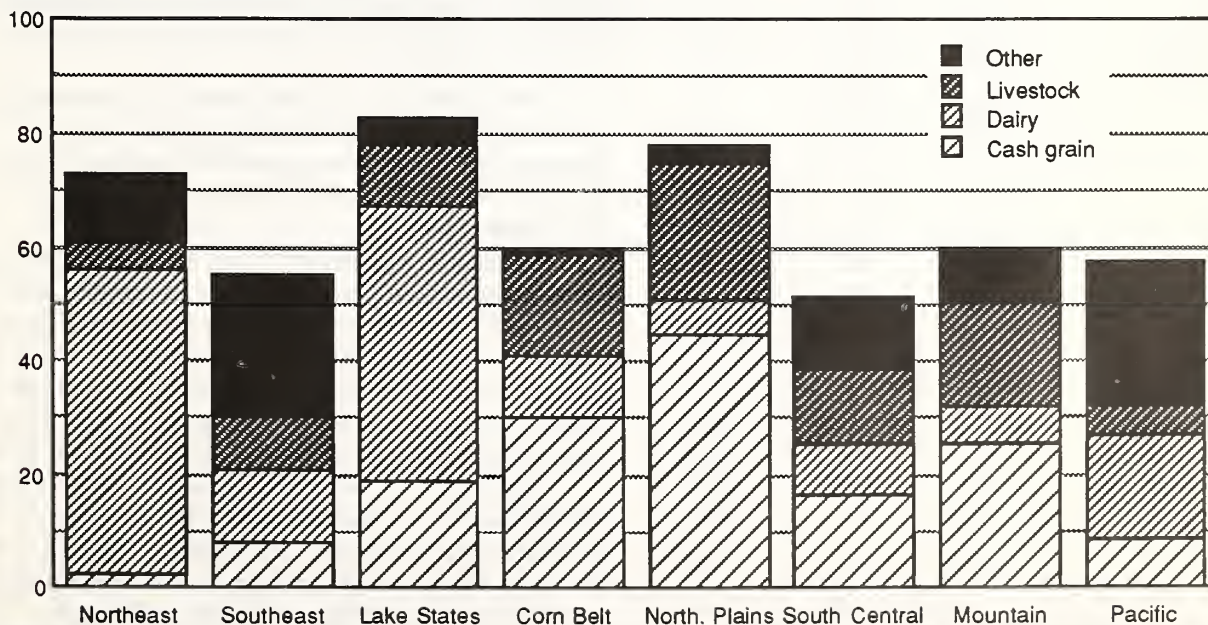


Figure 5 - Percentage of Commercial Farmers Who Held Cooperative Memberships, by Region and Farm Type, 1986

Percent



USE OF MARKETING COOPERATIVES

Members

In 1986, nearly 271,000 commercial farmers (46 percent) held one or more cooperative memberships in a marketing and/or farm supply cooperative and used a marketing cooperative--down only 2,000 from 1980 (table 11). Of the 271,000 farmer-members who used cooperatives for marketing, 35 percent were dairy, 35 percent were cash grain, 18 percent, livestock, and 12 percent, "other." Nearly 66 percent of the members who used cooperatives for marketing were in the Lake States, Corn Belt, and Northern Plains. Forty-four percent had annual gross sales of \$40,000 to \$99,999.

The major reason for the small decline in the use

of cooperatives for marketing was because increased use by dairy and "other" farmer members offset the decline in use by cash grain and livestock producer members. The major change in use of cooperatives for marketing was the 77 percent increase among farmers with sales of \$500,000 or more.

The highest percentage of commercial farmer members who used cooperatives for marketing was found among dairy farmers in the Lake States and the South Central regions and among farmers with annual sales of \$100,000 to \$499,999. The lowest percentages were among livestock producers in the Mountain region and cash grain farmers in the Southeast (table 12).

By farm size, the lowest percentage of commercial farmer members who used cooperatives for marketing was among farmers in the smallest size grouping (\$40,000 to \$99,999). For cash grain and livestock producers, the percentage of members increased as size of farm increased, except for the largest farms. Overall, the percentage of commercial farmers who held membership and used a marketing cooperative decreased slightly as age of operator increased, but this varied by farm type.

Table 11—Commercial farmer members who used cooperatives for marketing, 1980 and 1986

Category	Members		Percent change ¹
	1980	1986	
<i>- - Thousands - -</i>			
Region:			
Northeast	22	22	-3.5
Southeast	17	20	14.3
Lake States	53	63	19.4
Corn Belt	83	59	-29.0
Northern Plains	48	57	17.2
South Central	17	23	35.8
Mountain	10	10	-2.1
Pacific	18	19	1.6
Farm type:			
Cash grain	109	95	-13.3
Dairy	81	96	18.9
Livestock	52	48	-9.1
Other	26	33	24.2
Farm size:			
\$ 40,000 - \$ 99,999	137	120	-12.3
\$100,000 - \$249,999	87	106	23.0
\$250,000 - \$499,999	36	29	-20.6
\$500,000 or more	9	15	77.0
Total ²	269	271	.9

¹Changed based on number of members before rounding to thousands.

²Totals may not add due to rounding.

Farmers

By including nonmember patrons with members, more than 293,000, or 49 percent, of commercial farmers used one or more cooperatives for marketing compared with more than 305,000, or 48 percent, in 1980. Four percent of commercial farmers (22,000) who used cooperatives for marketing in 1986 were nonmember patrons.

From 1980 to 1986, the number of commercial farmers (members and nonmembers) who used cooperatives for marketing declined 4 percent. The decrease occurred among cash grain and livestock producers (table 13).

Comparison of tables 11 and 13 shows 50 percent of the nonmember patrons (number of farmers less number of members) in 1986 were commercial-grain farmers. About 10,000 nonmember patrons were in the Corn Belt and 8,000 in the Northern Plains and Lake States. Consequently, most nonmember patrons who used cooperatives for marketing were in these regions.

Farm products marketed by nonmembers would not necessarily be their principal product. Grain is produced over a wide area and on many types of farms. For dairy and livestock producers who did not hold a cooperative membership, grain was probably the common product marketed. Dairy farmers would most

Table 12—Percentage of commercial farmer members who used cooperatives for marketing, 1986¹

Category	Farm type				All farmers
	Cash grain	Dairy	Livestock	Other	
Percent in each category					
Region:					
Northeast	38	64	25	23	51
Southeast	14	53	20	32	30
Lake States	62	76	52	33	66
Corn Belt	34	66	27	20	36
Northern Plains	60	68	48	58	56
South Central	46	76	23	29	37
Mountain	43	46	12	19	27
Pacific	59	71	19	43	48
Farm size:					
\$ 40,000 - \$ 99,999	43	67	28	29	42
\$100,000 - \$249,999	49	72	35	35	50
\$250,000 - \$499,999	51	71	46	30	50
\$500,000 or more	46	69	32	42	47
Operator's age:					
Less than 36	46	66	31	28	47
36 to 54	45	70	31	34	45
55 or more	44	69	31	30	43
Total	45	69	31	32	45

¹This included farmers who held membership in a marketing or farm supply cooperative.

Table 13—Commercial farmers who used cooperatives for marketing, 1980 and 1986

Category	Farmers		Percent change ¹
	1980	1986	
<i>- -Thousands- -</i>			
Region:			
Northeast	24	22	-6.3
Southeast	21	20	-2.7
Lake States	57	67	17.1
Corn Belt	98	69	-29.8
Northern Plains	53	61	16.1
South Central	20	24	17.8
Mountain	13	11	-14.5
Pacific	20	19	-5.6
Farm type:			
Cash grain	131	106	-19.0
Dairy	85	100	18.2
Livestock	59	52	-11.3
Other	31	35	13.4
Farm size:			
\$ 40,000 - \$ 99,999	159	131	-17.7
\$100,000 - \$249,999	97	116	19.4
\$250,000 - \$499,999	39	30	-22.8
\$500,000 or more	10	16	63.2
Total ²	305	293	-4.0

¹Change based on commercial farmer numbers before rounding to thousands.

²Totals may not add due to rounding.

likely hold membership in a cooperative in order to market their milk. And most cooperatives marketing livestock are relatively easy to join. Outside of grain marketing in the Corn Belt, Northern Plains, and Lake States, marketing through a cooperative was done almost entirely by members.

The major change from 1980 to 1986 was an increase of nearly 66,000 in the number of commercial farmers who used one marketing cooperative compared with a decline of nearly 78,000 farmers who used two or more. Only those farmers with gross sales of \$500,000 or more increased their use of three or more cooperatives for marketing.

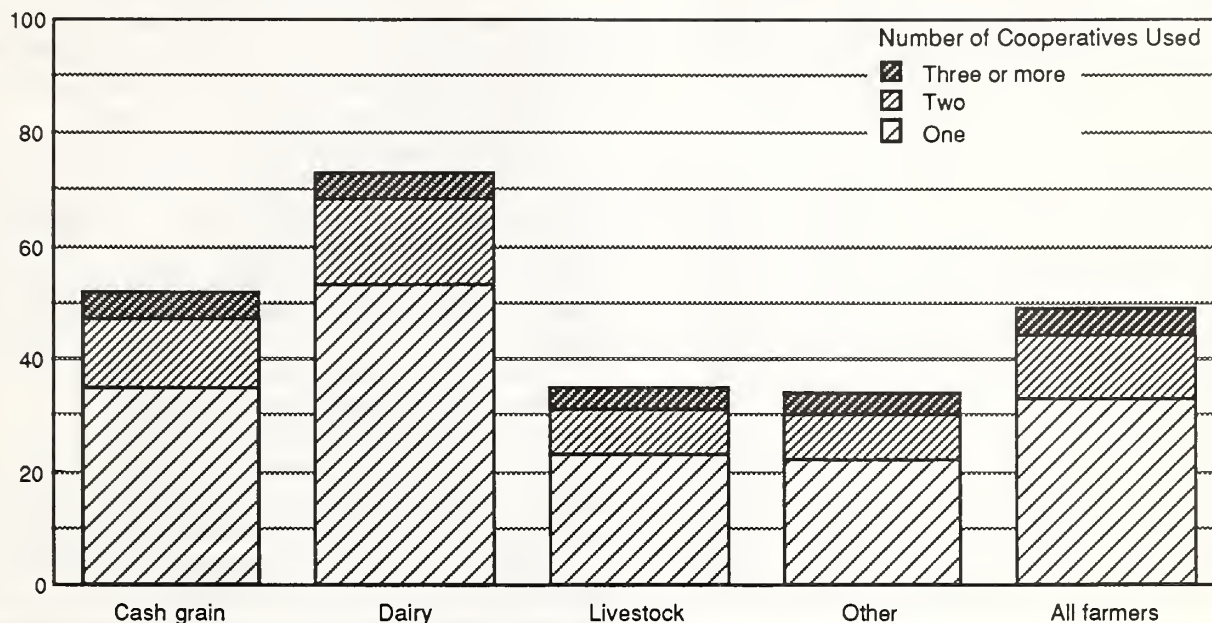
Table 14—Percentage of commercial farmers who used cooperatives for marketing, 1986

Category	Cooperatives used			Commercial farmers ¹
	One	Two	Three or more	
<i>Percent in each category</i>				
Region:				
Northeast	45	7	1	54
Southeast	24	6	2	31
Lake States	45	20	6	71
Corn Belt	31	8	3	43
Northern Plains	37	16	9	62
South Central	25	9	5	39
Mountain	23	4	3	30
Pacific	39	6	4	49
Farm type:				
Cash grain	35	11	5	52
Dairy	53	15	5	73
Livestock	23	8	4	35
Other	23	8	4	34
Farm size:				
\$ 40,000 - \$ 99,999	32	10	3	45
\$100,000 - \$249,999	36	12	6	54
\$250,000 - \$499,999	35	11	7	53
\$500,000 or more	31	9	7	48
Operator's age:				
Less than 36	36	13	4	54
36 to 54	34	11	5	50
55 or more	33	9	4	46
Total	34	11	5	49

¹Totals may not add due to rounding.

Figure 6 - Percent of Commercial Farmers Who Used One or More Cooperatives for Marketing, by Farm Type and All Commercial Farmers, 1986

Percent of farmers in each category



Use of multiple cooperatives for marketing was greatest among commercial farmers in the Northern Plains and Lakes States and among dairy farmers (table 14 and fig. 6). This was probably the result of dairy farmers using different cooperatives to market their milk, grain, and/or other products.

The percentage of commercial farmers who used cooperatives for marketing in 1986 was lowest among farmers in the Mountain region and among "other" farmers. In general, the percentage of commercial farmers who used cooperatives for marketing decreased as age of operator increased.

The percentage of commercial farmers who were nonmember patrons was highest among cash grain farmers; farmers in the Corn Belt; those with gross sales of \$100,000 to \$249,999; and among the youngest group of farmers. The lowest percentage of commercial farmers who were nonmember patrons was among farmers in the Southeast and Pacific regions; "other" farmers; those with sales of \$500,000 or more; and among the oldest group.

Table 15—Commercial farmer members who used cooperatives to purchase farm supplies, 1980 and 1986

Category	Members		Percent change ¹
	1980	1986	
- - -Thousands- - -			
Region:			
Northeast	29	26	-10.6
Southeast	31	28	-9.2
Lake States	61	73	20.4
Corn Belt	107	89	-16.9
Northern Plains	58	74	27.7
South Central	20	28	35.8
Mountain	17	20	15.6
Pacific	15	15	.4
Farm type:			
Cash grain	132	128	-2.7
Dairy	95	102	6.8
Livestock	79	84	6.3
Other	33	39	20.2
Farm size:			
\$ 40,000 - \$ 99,999	181	164	-9.6
\$100,000 - \$249,999	102	134	30.7
\$250,000 - \$499,999	45	37	-18.1
\$500,000 or more	10	19	82.7
Total ²	339	354	4.3

¹Change based on number of members before rounding to thousands.

²Totals may not add due to rounding.

USE OF FARM SUPPLY COOPERATIVES

Members

More commercial farmer members used cooperatives to purchase farm supplies than to market their farm products. Except for a few cases, the Pacific region for example, this difference occurred among all regions, farm types and sizes, and age groups.

Sixty percent (354,000) of commercial farmer members (339,000 in 1980) used a cooperative to purchase farm supplies compared with only 46 percent (271,000) who used a cooperative for marketing. Nearly 67 percent of the 354,000 members were located in the Corn Belt, Northern Plains, and Lake States regions.

Even with the drop in farms from 1980 to 1986, more commercial farmers used cooperatives to purchase farm supplies. The largest percentage increases were among farmers in the South Central region; "other" commercial farms; and those with annual sales of \$500,000 or more (table 15).

Table 16 shows the percentage of commercial farmers who were members and used a cooperative to purchase farm supplies in 1986. It was highest among "other" farmers in the Northern Plains; dairy farmers with annual sales of \$250,000 to \$499,999; and dairy farmers at least 55 years of age. It was lowest among "other" farmers in the Corn Belt.

Farmers

In 1986, more than 422,000, or 71 percent, of all commercial farmers used one or more cooperatives to purchase farm supplies compared with 409,000, or 64 percent, in 1980.

In 1986, nearly 69,000, or 11 percent, of commercial farmers purchased farm supplies as nonmember patrons. Nearly 61 percent of the commercial farmers who purchased supplies used one cooperative, nearly 24 percent used two, and over 15 percent used three or more. Nearly 66 percent were in the Corn Belt, Northern Plains, and Lake States.

Commercial farmers who used cooperatives to purchase farm supplies increased 3.3 percent from 1980 to 1986 (table 17). The major change was the nearly 80-percent increase in farmers with \$500,000 or more in annual sales who used cooperatives to purchase farm supplies.

Table 16—Percentage of commercial farmers who were members and used a cooperative to purchase farm supplies, 1986¹

Category	Farm type				Commercial farms
	Cash grain	Dairy	Livestock	Other	
Percent in each category					
Region:					
Northeast	57	67	58	54	63
Southeast	43	74	47	33	44
Lake States	76	83	83	46	78
Corn Belt	52	73	58	27	56
Northern Plains	78	80	70	88	75
South Central	52	77	40	36	46
Mountain	71	64	45	43	55
Pacific	68	42	26	34	39
Farm size:					
\$ 40,000 - \$ 99,999	60	73	54	34	57
\$100,000 - \$249,999	64	77	58	38	63
\$250,000 - \$499,999	65	79	66	43	64
\$500,000 or more	71	45	59	55	57
Operator's age:					
Less than 36	61	74	58	35	62
36 to 54	62	72	56	37	58
55 or more	64	76	58	43	61
Total	62	74	57	39	60

¹Included commercial farmers who held membership in any marketing/farm supply cooperative.

Table 17—Farmers who used cooperatives to purchase farm supplies, 1980 and 1986

Category	Farmers		Percent change ¹
	1980	1986	
- - -Thousands- - -			
Region:			
Northeast	35	30	-13.7
Southeast	41	35	-13.3
Lake States	70	80	13.1
Corn Belt	129	114	-12.1
Northern Plains	65	85	29.1
South Central	27	35	30.7
Mountain	23	26	12.2
Pacific	18	18	-1.6
Farm type:			
Cash grain	162	152	-6.1
Dairy	108	108	-.1
Livestock	96	112	16.8
Other	44	51	16.4
Farm size:			
\$ 40,000 - \$ 99,999	225	201	-10.8
\$100,000 - \$249,999	121	157	30.2
\$250,000 - \$499,999	51	43	-16.9
\$500,000 or more	12	22	79.7
Total ²	409	422	3.3

¹Changed based on number of farmers before rounding to thousands.

²Totals may not add due to rounding.

The number of farmers who used one cooperative to purchase supplies increased more than 41,000 but the number who used two or more cooperatives dropped nearly 28,000.

The highest percentage of farmers (table 18) who used cooperatives to purchase farm supplies was among farmers in the Northern Plains; dairy farmers; farmers with annual sales of \$250,000 to \$499,999; and farmers 36 or younger. However, the highest percentage who used two or more cooperatives was among those in the Lake States and among livestock producers (fig. 7).

The percentage of nonmember patrons who used cooperatives for farm supplies was highest among farmers in the Mountain and Corn Belt regions (17 and 15 percent, respectively); livestock producers (18 percent); and those in the smallest sales category (13 percent). It was lowest among farmers in the Pacific

Table 18—Percentage of commercial farmers who used cooperatives to purchase farm supplies, 1986

Category	Cooperatives used			Commercial farmers ¹
	One	Two	Three or more	
<i>Percent in each category</i>				
Region:				
Northeast	47	17	9	73
Southeast	42	9	3	54
Lake States	38	25	22	85
Corn Belt	49	15	7	71
Northern Plains	42	25	19	86
South Central	39	12	8	59
Mountain	52	10	9	72
Pacific	33	9	3	45
Farm type:				
Cash grain	46	17	11	74
Dairy	47	19	11	78
Livestock	40	20	15	75
Other	37	9	5	50
Farm size:				
\$ 40,000 - \$ 99,999	43	16	10	70
\$100,000 - \$249,999	44	18	12	73
\$250,000 - \$499,999	41	17	15	74
\$500,000 or more	46	13	8	68
Operator's age:				
Less than 36	43	18	14	75
36 to 54	41	17	11	69
55 or more	47	16	9	72
Total	43	17	11	71

¹Totals may not add due to rounding.

region (6 percent) and among dairy farmers (4 percent).

In 1986, only 15.4 percent of the commercial farmers had sales of \$250,000 or more (fig. 8). However, 85 to 87 percent of these farmers used cooperatives (fig. 9). The important point for cooperatives is that it's estimated these same farmers accounted for more than a third each of gross farm income and total production expenses.

Figure 7 - Percent of Commercial Farmers Who Used One or More Cooperatives for Purchasing Farm Supplies, by Farm Type and All Commercial Farmers, 1986

Percent of farmers in each category

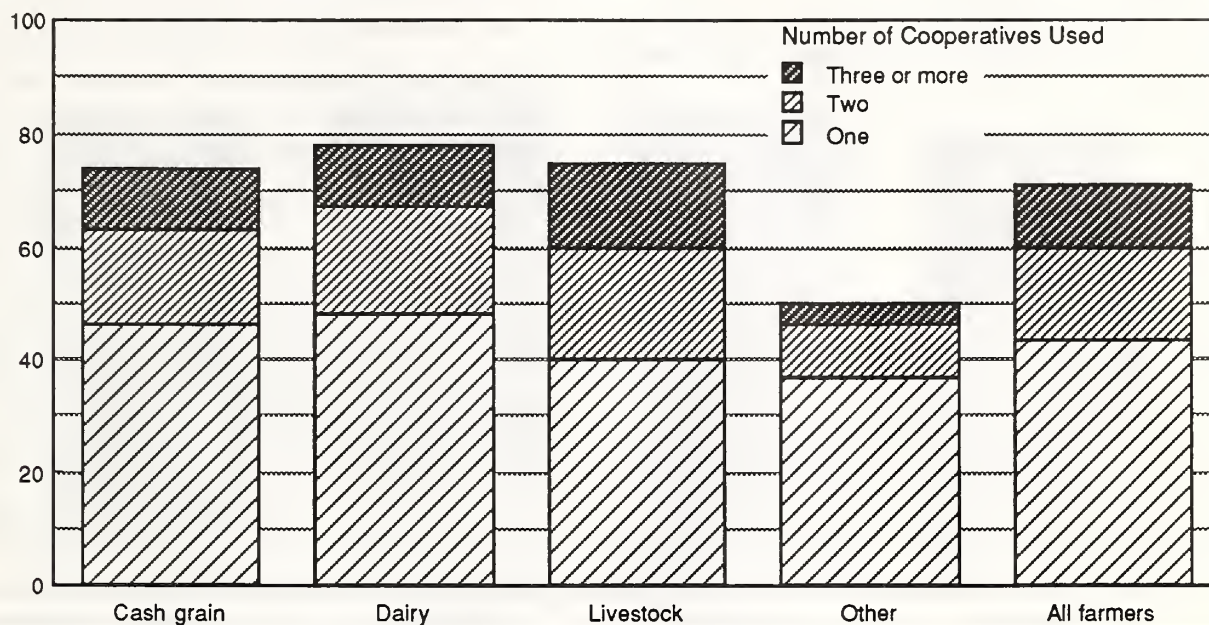
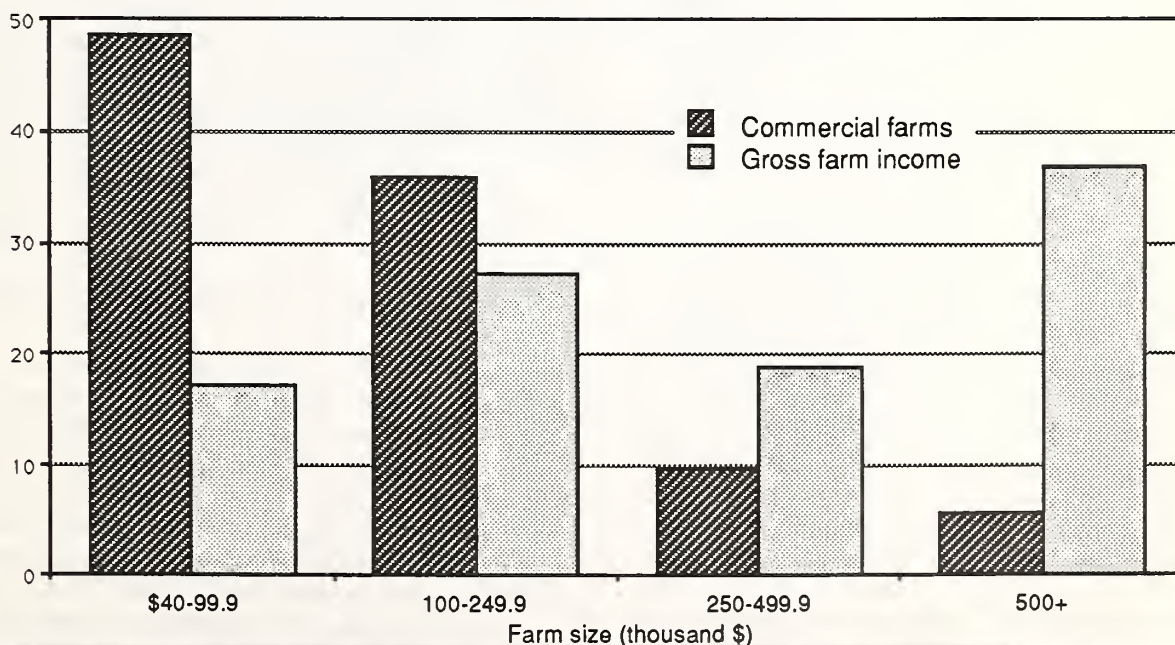


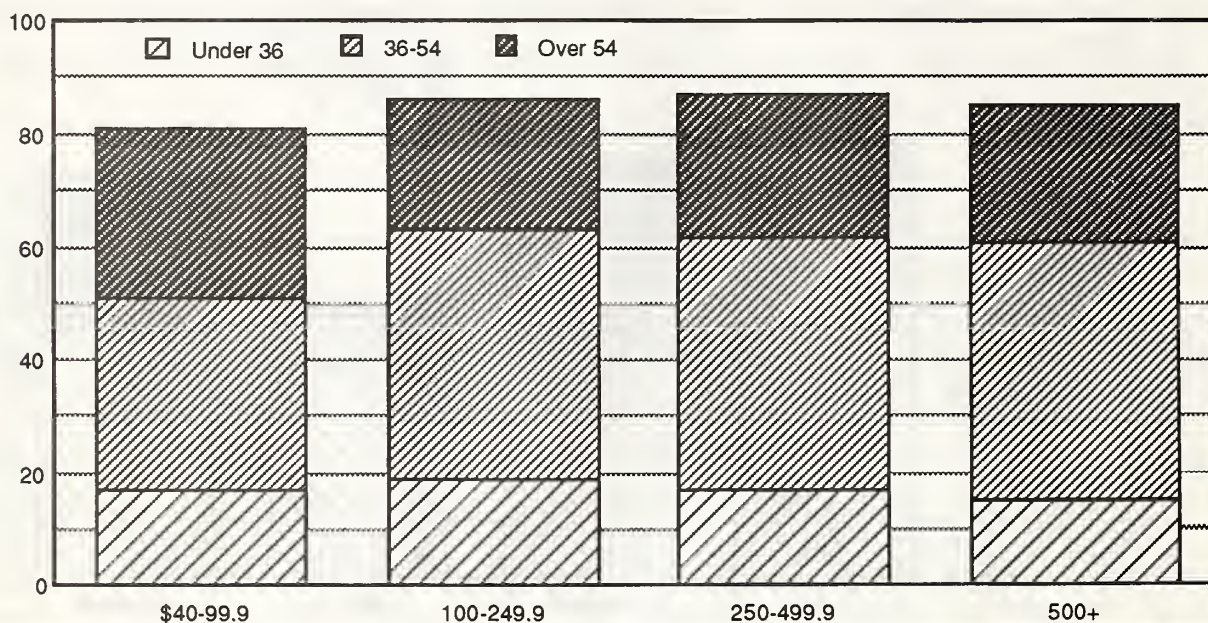
Figure 8 - Distribution of Commercial Farms and Gross Farm Income, by Farm size, 1986

Percent



**Figure 9 - Percent of Commercial Farmers Who Used Cooperatives,
by Farm Size and Operator's Age**

Percent of farmers in each category



INACTIVE MEMBERS

Nearly 14,000, or 2.3 percent, of commercial farmers who held cooperative memberships did not use them--down from more than 53,000, or 8.3 percent, in 1980. This included members who used other cooperatives as nonmember patrons.

The number of inactive members decreased in all regions, farm types, and farm sizes. The net decrease totaled nearly 40,000. The largest decreases were among farmers in the Corn Belt; cash grain and livestock producers; and farmers with sales of \$40,000 to \$99,999.

In 1986, the largest number of inactive members was in the Corn Belt (5,200); among cash grain farmers (7,300); and among those with annual gross farm sales of \$40,000 to \$99,999 (7,400).

The percentage of commercial farmers who were inactive members varied by region, farm type, and farm size--as shown in table 19.

NONMEMBER PATRONS

Nonmember patrons can be placed in two groups: (1) nonmember patrons of one cooperative holding membership in another, and (2) nonmember patrons holding no membership in any cooperative.

Information on the first group provides additional insight into the characteristics of farmer members. Information on the second group provides additional information on farmers who have no ties with cooperatives but patronize them as nonmembers.

When farmers in the second group are added to those holding cooperative membership, a more accurate picture is presented of the percentage of farmers involved with cooperatives (78 percent, or nearly 463,000 commercial farmers in 1986, compared with 76 percent, or nearly 490,000 in 1980).

Held Membership In Another Cooperative

Nearly 67,000, or 11 percent, of all commercial farmers held membership in at least one cooperative and patronized another cooperative on a nonmember basis--down from 78,000, or 12 percent, in 1980. The decrease in nonmember patrons (who held membership in another cooperative) was mostly among those who used cooperatives for both marketing and purchasing. Nonmember patrons declined in every region, farm type except "other", and farm size grouping. However,

Table 19—Percentage of commercial farmers who were inactive members, 1980 and 1986

Category	Inactive members	
	1980	1986
<i>Percent in each category</i>		
Region:		
Northeast	8	3
Southeast	6	2
Lake States	9	2
Corn Belt	10	3
Northern Plains	12	2
South Central	4	2
Mountain	4	2
Pacific	6	1
Farm type:		
Cash grain	10	4
Dairy	7	2
Livestock	8	1
Other	7	2
Farm size:		
\$ 40,000 - \$ 99,999	8	3
\$100,000 - \$249,999	8	2
\$250,000 - \$499,999	11	1
\$500,000 or more	8	2
Operator's age:		
Less than 36	—	2
36 to 54	—	2
55 or more	—	3
Total	8	2

— = Data not collected for 1980.

nonmember patrons who used cooperatives only for purchasing increased. Most of this increase was among farmers in the Northern Plains and Northeast regions and those with annual sales of \$100,000 to \$249,999.

The percentage of commercial farmers who were members and used other cooperatives as nonmembers is shown in table 20. In 1980, the Lake States accounted for the largest percentage of commercial farmers who patronized other cooperatives as nonmembers; in 1986, the Northeast had the highest percentage. Overall, percentage of commercial farmers who were members and used other cooperatives as nonmembers decreased as age increased.

Table 20—Percentage of commercial farmers who held memberships but patronized other cooperatives as nonmembers, 1980 and 1986

Category	Patronized other co-ops as nonmembers	
	1980	1986
<i>Percent in each category</i>		
Region:		
Northeast	16	21
Southeast	11	6
Lake States	17	15
Corn Belt	12	11
Northern Plains	12	12
South Central	8	9
Mountain	9	8
Pacific	10	7
Farm type:		
Cash grain	13	11
Dairy	12	10
Livestock	16	16
Other	7	8
Farm size:		
\$ 40,000 - \$ 99,999	12	12
\$100,000 - \$249,999	13	12
\$250,000 - \$499,999	14	9
\$500,000 or more	11	7
Operator's age:		
Less than 36	—	14
36 to 54	—	11
55 or more	—	9
Total	12	11

— = Data not collected for 1980.

Held No Cooperative Membership

More than 72,000, or 12 percent of commercial farmers held no cooperative membership but patronized at least one cooperative--a net decrease of over 4,000 since 1980. More than 69 percent of the 72,000 commercial farmers used at least one cooperative for purchasing farm supplies only. Nearly 5 percent used one or more cooperatives for marketing only and the remaining 26 percent used at least one cooperative for both marketing and purchasing.

From 1980 to 1986, more commercial farmers (10,000) used cooperatives as nonmember patrons for purchasing farm supplies only and fewer used cooperatives for marketing (3,000) or for both marketing and purchasing (11,000).

The greatest increase in number of commercial farmers who used cooperatives as nonmember patrons for purchasing alone occurred in the Corn Belt; among dairy farmers; and among those farmers with gross sales of \$100,000 to \$249,999. The number of commercial farmers who used cooperatives for marketing alone dropped in every region except the Lake States; among all farm types except livestock; and in every size grouping. A similar pattern existed for those commercial farmers who used cooperatives for both marketing and purchasing, except the number increased among farmers in the Northern Plains and among dairy farmers.

Nearly 51 percent of these nonmember patrons were located in the Corn Belt and Northern Plains regions. Nearly 68 percent were cash grain and dairy farmers, 87 percent had gross sales of \$40,000 to \$249,999, and nearly 46 percent were 36 to 54 years old.

The highest percentage of commercial farmers who were nonmember patrons was among commercial farmers in the Corn Belt and Northern Plains regions (5.5 percent in each); dairy farmers (6 percent); and those farmers with annual gross sales of \$40,000 to \$99,999 (13.5 percent).

NONMEMBER NONPATRONS

Nearly 131,000, or 22 percent, of commercial farmers neither held membership in nor patronized a cooperative--a 20,000, or 13 percent, decrease from the nearly 151,000 nonmember nonpatrons in 1980.

Nearly 63 percent of the 131,000 farmers were located in the Corn Belt, Southeast, and South Central regions. Thirty-two percent were cash grain farmers; 30 percent, "other", 28 percent, livestock producers; and the remaining 10 percent, dairy farmers. Nearly 86 percent had gross sales of \$40,000 to \$249,999. Only 5 percent were in the largest group. Nearly 50 percent were 36 to 54 years old and 31 percent were at least 55 years old.

From 1980 to 1986, the percentage of commercial farmers who were nonmember nonpatrons increased in three regions. In the remaining regions, farm types, and almost all size groupings, the percentage of commercial farmers who neither held membership nor patronized a cooperative declined (table 21).

Table 21—Percentage of commercial farmers who were nonmember nonpatrons, 1980 and 1986

Category	Nonmember nonpatrons	
	1980	1986
<i>Percent in each category</i>		
Region:		
Northeast	14	17
Southeast	33	34
Lake States	13	9
Corn Belt	21	24
Northern Plains	14	11
South Central	44	36
Mountain	32	23
Pacific	36	35
Farm type:		
Cash grain	21	20
Dairy	10	9
Livestock	28	25
Other	42	38
Farm size:		
\$ 40,000 - \$ 99,999	25	24
\$100,000 - \$249,999	20	20
\$250,000 - \$499,999	21	20
\$500,000 or more	35	21
Operator's age:		
Less than 36	—	20
36 to 54	—	23
55 or more	—	22
Total	24	22

— = Data not collected for 1980.

COMMERCIAL FARMERS' USE OF COOPERATIVES FOR PRODUCTS MARKETED

In the 1980 survey of farmers, information was not collected to determine the percent of business farmers did with cooperatives. To find out, additional questions were added to the 1986 survey.

Forty-five percent of commercial farmers reported the percentage of their farm sales they marketed through cooperatives.⁶ Nineteen percent of commercial farmers marketed 81 to 100 percent of their

farm products through cooperatives. This high percentage demonstrates the importance of cooperatives to this group.

Thirteen percent of commercial farmers marketed

⁶ This is low in comparison to the number of commercial farmers (49 percent) who reported they used a cooperative for marketing. Two probable explanations exist. One, farmers may have used the services of a cooperative without marketing any product through it; two, farmers may have reported using a cooperative for marketing but the volume was too low to report a percentage figure.

Table 22—Commercial farmers' use of cooperatives for products marketed, 1986

Category	Percent of total gross sales					Commercial farmers ¹
	1-20	21-40	41-60	61-80	81-100	
Percent in each category						
Region:						
Northeast	7	1	1	4	30	45
Southeast	2	4	6	5	11	28
Lake States	8	4	8	7	37	64
Corn Belt	7	6	8	5	13	39
Northern Plains	14	10	12	7	17	59
South Central	4	6	5	6	14	36
Mountain	6	5	2	4	8	26
Pacific	5	2	3	5	29	44
Farm type:						
Cash grain	7	7	11	7	16	49
Dairy	6	1	5	9	44	65
Livestock	11	8	5	1	5	30
Other	5	4	4	6	12	31
Farm size:						
\$ 40,000 - \$ 99,999	6	5	6	7	18	42
\$100,000 - \$249,999	8	5	9	5	22	49
\$250,000 - \$499,999	9	10	8	5	15	46
\$500,000 or more	10	5	4	2	21	41
Operator's age:						
Less than 36	8	5	7	7	23	49
36 to 54	8	6	8	6	19	45
55 or more	6	6	6	6	18	42
Total	7	5	7	6	19	45

¹Totals may not add due to rounding.

Figure 10 - Percent of Commercial Farmers Who Used Cooperatives for Marketing, by Farm Type and All Commercial Farmers, 1986

Percent of farmers in each category

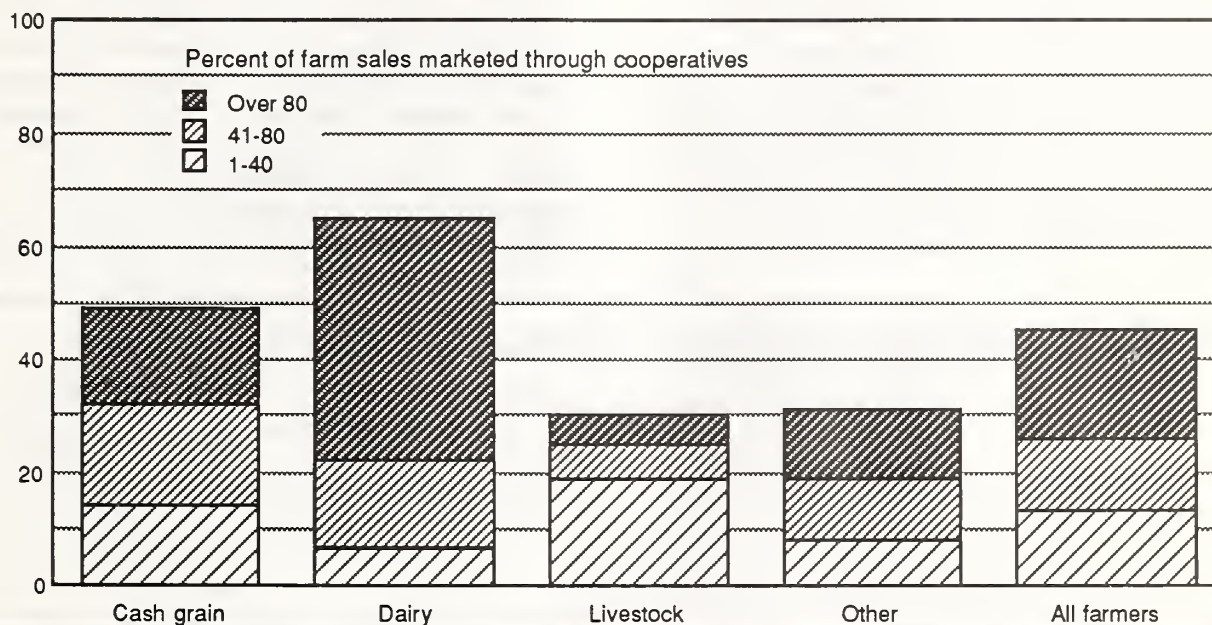
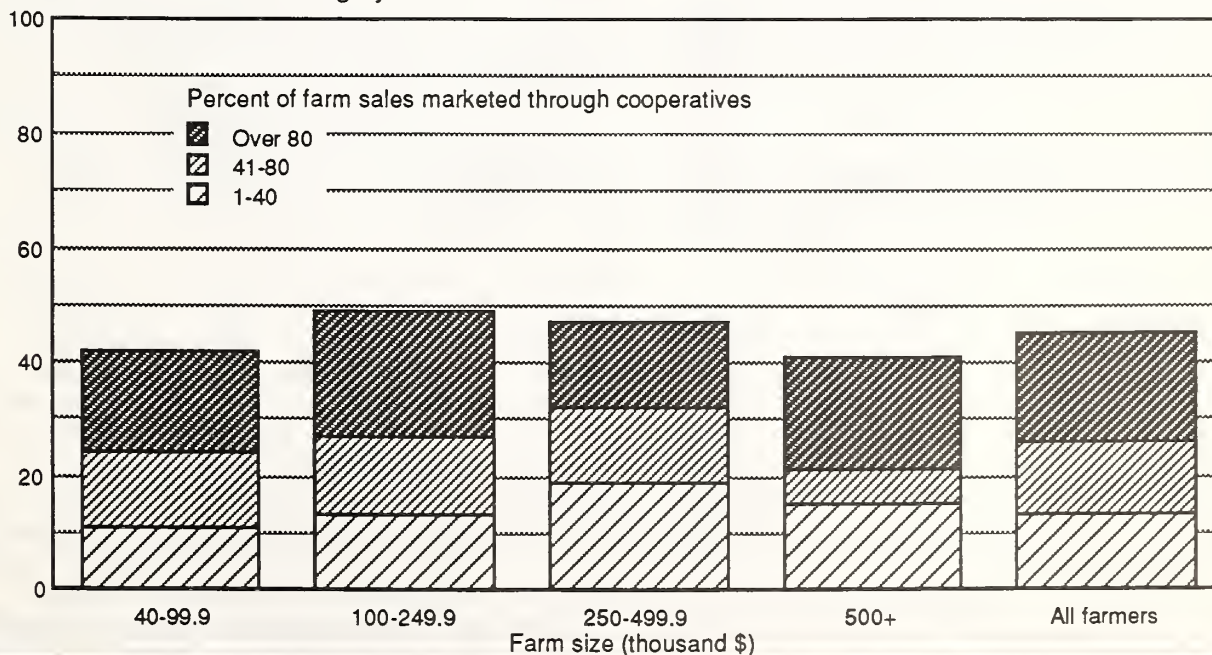


Figure 11 - Percent of Commercial Farmers Who Used Cooperatives for Marketing, by Farm Size and All Commercial Farmers, 1986

Percent of farmers in each category



41 to 80 percent and 12 percent marketed, 1 to 40 percent of their farm sales (table 22 and figures 10 and 11). The use of cooperatives for marketing was not as important to these farmers--especially those in the latter group.

The highest percentage of commercial farmers who marketed 81 to 100 percent of their farm products through cooperatives was among farmers in the Lake States; dairy farmers; those farmers with gross sales of \$100,000 to \$249,999; and those under 36 years old.

Two-thirds of the dairy farmers who marketed through a cooperative marketed 81 to 100 percent. Only one-third of the grain farmers who used a

cooperative marketed over 80 percent. Dairy farmers generally specialize in producing milk and marketing through a single outlet. Cash grain farmers, however, are more likely to have additional production enterprises and may market grain and other products through several outlets. Producers with several production enterprises may find it inconvenient to belong to a marketing cooperative for each enterprise.

The Northern Plains and Corn Belt regions are strong grain-producing areas. About one-third of commercial farmers in these regions who used cooperatives marketed at least 81 percent of their products through cooperatives. On the other hand, the

Table 23—Commercial farmers' use of cooperatives for principal product marketed, 1986

Category	Percent of principal product sales					Commercial farmers¹
	1-20	21-40	41-60	61-80	81-100	
<i>Percent in each category</i>						
Region:						
Northeast	2	1	1	2	31	37
Southeast	1	(²)	1	1	19	22
Lake States	2	1	3	2	45	54
Corn Belt	4	3	5	2	21	34
Northern Plains	6	5	6	4	26	48
South Central	2	2	3	3	19	29
Mountain	5	2	2	2	12	23
Pacific	2	1	2	2	33	40
Farm type:						
Cash grain	6	4	7	4	24	45
Dairy	1	1	1	3	52	57
Livestock	4	1	2	1	8	16
Other	2	1	1	2	21	26
Farm size:						
\$ 40,000 - \$ 99,999	3	2	3	3	24	35
\$100,000 - \$249,999	3	2	4	3	30	42
\$250,000 - \$499,999	4	4	5	2	22	37
\$500,000 or more	5	2	3	1	23	34
Operator's age:						
Less than 36	3	2	4	3	30	42
36 to 54	4	3	3	2	26	38
55 or more	3	2	3	3	24	34
Total	3	2	3	3	26	38

¹Totals may not add due to rounding.

²Less than 0.5 percent.

Northeast and Lake States regions are strong dairy-producing areas where about two-thirds of the commercial farmers who used cooperatives marketed 80 percent or more through them.

Among livestock producers, only 30 percent marketed livestock through cooperatives. And only 5 percent marketed more than 80 percent of their livestock through cooperatives. Overall, livestock producers made the lowest use of cooperatives for marketing their principal product.

Thirty-eight percent of commercial farmers marketed all or some portion of their principal product through cooperatives. More than two-thirds, or nearly 70 percent, of these farmers marketed 81 to 100 percent of their principal product through cooperatives. Sixteen percent marketed 41 to 80 percent and nearly 14 percent marketed less than 41 percent.

The highest percentage of commercial farmers who marketed all or some portion of their principal product through cooperatives was among farmers in the Lake States; dairy farmers; those farmers with sales of \$100,000 to \$249,999; and those younger than 36. The lowest percentages were found among farmers in the Southeast; livestock producers; those with gross sales of \$500,000 or more; and farmers 55 and older (table 23).

Farmers who used a cooperative for marketing their principal product tended to be highly committed by volume. This was true for each age group and by farm size. However, grain and livestock producers who used cooperatives were not quite as committed. Only about 50 percent of the commercial farmers who used cooperatives in these two groups marketed more than 80 percent of their principal product through cooperatives. The other 50 percent used cooperatives and noncooperatives for marketing their principal product.

Cooperatives marketing grain and livestock have the opportunity to obtain considerable additional marketing volume from current patrons. Cooperatives marketing milk and "other" products, however, need to seek new patrons to increase market share.

An important point is that commercial farmers who used cooperatives for marketing were more likely to market most of their principal product through a cooperative than all products in general.

Cooperatives generally specialize in a single product. Consequently, farmers who produced multiple products tended not to market their minor products through cooperatives.

Livestock producers are somewhat of an exception. Thirty percent of commercial livestock producers used cooperative marketing services, but only

16 percent actually marketed livestock through a cooperative. More livestock producers used cooperatives for marketing other products than they did to market their principal product.

The percentage of commercial "other" farmers who used cooperatives for marketing was just about as low as it was for commercial livestock producers (30 percent). However, about two-thirds of the "other" farmers who used cooperatives for marketing, marketed more than 80 percent of their principal product through cooperatives. Some commercial "other" farmers producing such products as cotton, fruits, and nuts appear to use cooperatives for marketing most of their product.

COMMERCIAL FARMERS' USE OF COOPERATIVES FOR FARM SUPPLIES PURCHASED

Commercial farmers were asked the percentage of farm supplies--feed, fertilizer, farm chemicals, petroleum, and seed--purchased from a cooperative.

More commercial farmers purchased fertilizer and farm chemicals from cooperatives than feed, seed, and petroleum. Forty-seven percent of commercial farmers purchased fertilizer from cooperatives in 1986 (table 24). Only 27 percent of commercial farmers purchased seed from cooperatives.

The percentage of farmers who purchased each of the major farm supplies was based on all commercial farmers. Some commercial farmers did not purchase feed. Almost all farmers, however, purchased

Table 24—Number and percent of commercial farmers who purchased major farm supplies from cooperatives, 1986

Farm supply	Commercial farmers	Percent of expenditures			Commercial farmers ¹
		1-40	41-80	81-100	
	1,000	- - -Percent in each category- - -			
Feed	204	10	7	18	34
Fertilizer	277	5	7	34	47
Farm chemicals	262	7	6	32	44
Seed	162	10	6	11	27
Petroleum	238	5	6	29	40

¹Totals may not add due to rounding.

Figure 12 - Commercial Farmers' Use of Cooperatives to Purchase Major Farm Supplies, 1986

Percent of farmers in each category

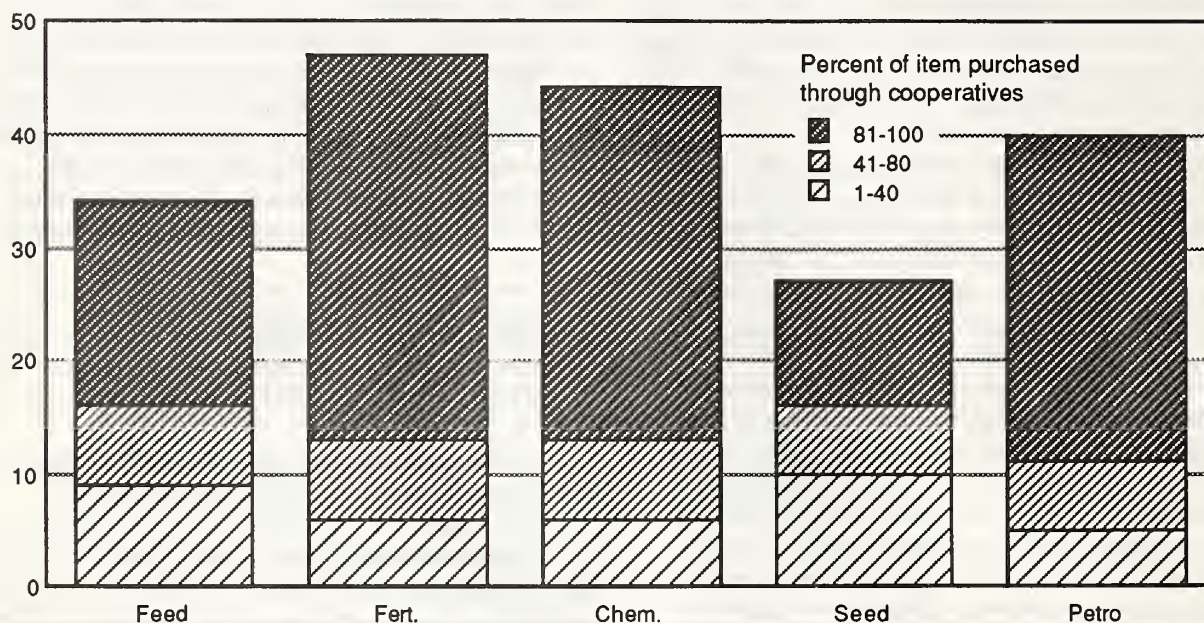
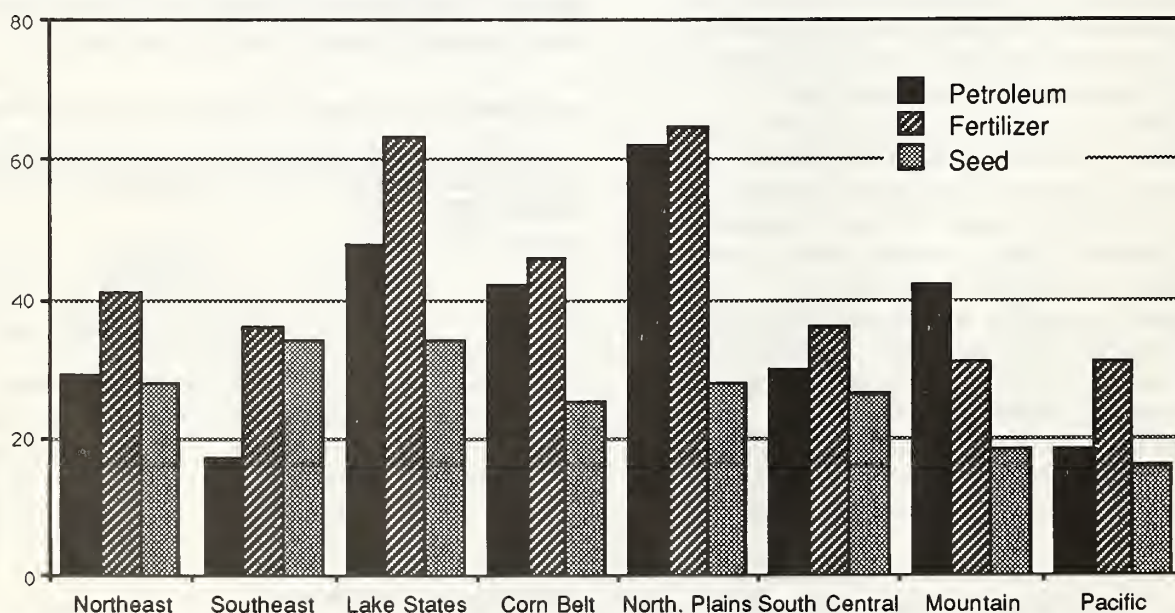


Figure 13 - Percentage of Farmers Who Purchased Petroleum, Fertilizer, and Seed from Cooperatives, by Region, 1986

Percent of farmers in each category



petroleum. Consequently, care must be taken in comparing the percentage of farmers who, for example, purchased feed or seed with the percentage of farmers who purchased petroleum.

Overall, commercial farmers in 1986 were more committed to purchasing most of their needed fertilizer, chemicals, and petroleum from cooperatives than seed and feed (fig. 12). For example, more than 72 percent of commercial farmers who purchased fertilizer from cooperatives purchased more than 80 percent of total fertilizer used on the farm. Only 41 percent of commercial farmers who purchased seed from cooperatives purchased more than 80 percent of seed used. About one-third (29 and 37 percent, respectively) of commercial farmers who purchased feed and seed from cooperatives purchased 40 percent or less.

In general, except for the largest farm operators, the percentage of farmers who purchased more than 80 percent of their major farm supplies from cooperatives increased with farm size. A smaller percentage of farm operators with sales of at least \$500,000 purchased more than 80 percent of their major farm supplies from cooperatives than those with annual sales of \$250,000 to \$499,999. Also, a higher percentage of the larger farm operators was more likely to purchase smaller quantities of supplies through cooperatives (appendix tables 1-5)

For example, only 11 percent of commercial farmers with sales of at least \$500,000 purchased more than 80 percent of their feed from cooperatives, but 8 percent purchased less than 21 percent.

Use of cooperatives to purchase major farm supplies varies by region. Figure 13, for example, shows the percentage of commercial farmers who purchased petroleum, fertilizer, and seed in each region. A larger percentage of commercial farmers purchased fertilizer than petroleum and seed from cooperatives in all but one region, the Mountain region.

The variation in percentage of farmers who purchased major farm supplies by region raises some interesting questions. What factors have led to such variation? How can cooperatives in some of the regions better serve farmers? What alternative sources of farm

supplies are farmers using?

CONCLUSIONS AND IMPLICATIONS

Farmer cooperatives appeared to be important to commercial farmers for a number of reasons: (1) most commercial farmers were either members or nonmember patrons; (2) even with the decline in number of commercial farmers from 1980 to 1986, the percentage of commercial farmers who were members or nonmember patrons increased slightly; (3) the percentage of commercial farmers who were inactive members declined, which actually increased the percentage of commercial farmers who were using cooperatives in 1986; (4) more of the largest farm operators were using cooperatives at least for part of their marketing and purchasing activities; and (5) younger commercial farmers were more involved with cooperatives than is sometimes reported.

However, the importance of cooperatives to commercial farmers in the future will depend upon how well cooperative leaders address some of the problems and issues facing their cooperatives. A large percentage of the commercial farmers who patronize cooperatives also patronize noncooperatives. Although many of the commercial farmers did show some commitment to cooperatives, a large number did a small percentage of their business with cooperatives.

Generally, membership in and use of cooperatives increased with farm size. However, the largest farms (\$500,000 or more) were an exception. The percentage of farmers in this group who used cooperatives declined slightly. This decline must be studied carefully, because a variety of factors were at work.

The composition of farms changed as size of farms became larger. For example, a lower percentage of dairy farmers who were the strongest users of cooperatives were among the largest farm operators. Therefore, functions performed by large farm operators rather than their attitude toward cooperatives or cooperative performance may be a factor in influencing use of cooperatives.

Cooperative leaders must address how they can best serve the commercial farmers for the following reasons:

1. Commercial farmers accounted for a large percentage of the gross farm income and total production expenses. Consequently, if cooperatives lost the business of the commercial farmers, the result

could be a drop in sales, income, and the means to grow. The loss could also increase the average cost to those farmers who are committed to the cooperative way of doing business.

2. Too many commercial farmers are patronizing cooperatives as nonmembers. In most cases, this does not help build commitment and the equity capital needed for financing cooperatives. It also raises the question of who would eventually control the cooperative if nonmember patronage were to increase?

3. Too many cooperatives are trying to serve the same commercial farmer in some areas of the country. This was shown by the large number of commercial farmers who used multiple cooperatives for marketing or purchasing. This trend appears to be increasing as far as percentage of commercial farmers among the largest farm operators.

4. Commercial farmers who purchased feed and seed from cooperatives used other supply sources to a greater extent than they did with purchases of petroleum, fertilizer, and farm chemicals.

OTHER PUBLICATIONS

Paul C. Wilkins, Marketing and Farm Supply Cooperatives: Membership and Use, 1980, ACS Research Report No. 28, ACS, USDA, Washington, D.C., May 1983.

_____, Marketing and Farm Supply Cooperatives: Livestock Producer Membership and Use, 1980, ACS Research Report No. 33, ACS, USDA, Washington, D.C., January 1984.

_____, Marketing and Farm Supply Cooperatives; Commercial Farmer Membership and Use, 1980, ACS Research Report No. 42, ACS, USDA, Washington, D.C., July 1984.

Charles A. Kraenzle, Roger A. Wissman, Thomas Gray, Beverly L. Rotan, and Celestine C. Adams, Farmer Cooperatives: Members and Use, ACS Research Report No. 77, ACS, USDA, Washington, D.C., April 1989.

Appendix

Survey Description

This report is based on special questions included in the June 1981 and June 1987 Acreage and Livestock Enumerative Surveys, conducted by the National Agricultural Statistics Service (NASS, formerly Statistical Reporting Service, SRS). The area frame was the basic sampling method used to collect the information. Information was obtained by personal interviews of nearly 17,000 farmers.

An earlier study was completed using information gathered from the June 1981 Acreage and Livestock Enumerative Survey. That study, however, did not collect information on level of cooperative usage and operator's age.

Three ACS reports covering the information were published in the early 1980's (see Other Publications). However, since the study included more regions and farm size groupings, actual data from the survey were used for making comparisons to data collected for 1986. Consequently, some differences may be found in 1980 data reported here and earlier published figures.

Survey estimates are subject to sampling variability. Coefficients of variation (CV) provide a means of evaluating survey results. If the CV of an item were 5 percent, chances are 67 out of 100 that the population value would be within 5 percent of the survey value and 95 out of 100 would be within 10 percent. Estimated CVs for farmers reporting membership in a cooperative by region, farm type, farm size, and operator's age are shown in appendix table 10.

As in all information collected by interview, nonsampling errors can occur, resulting from omissions, incorrect answers, and other errors in data. These errors cannot be measured directly but are minimized through rigid quality controls in data collection and through consistency checks before summarization.

Definitions

Marketing and farm supply cooperatives--Farmer cooperatives operating as marketing, farm supply, or both. Bargaining associations are counted as marketing cooperatives. Also included are cooperatives providing services related to marketing or furnishing farm supplies, such as cotton gins, rice dryers, and transportation cooperatives. These cooperatives usually provide for one vote per member, limited return on invested capital, and return of net margins to member patrons or all patrons on a patronage basis. They also obtain more than half their business from members.

Excluded from this study are cooperatives organized by farmers to provide production services, such as farm management, credit, fire insurance, electricity, and irrigation. Also excluded are cooperatives providing personal services and products, such as cooperative hospitals and medical clinics, burial societies, community (cooperative) water systems, and cooperative grocery stores.

Member patrons--Farmers holding membership in and marketing products through or purchasing farm supplies from a marketing and/or farm supply cooperative.

Nonmember patrons--Farmers not holding membership in but marketing products through or purchasing farm supplies from a marketing and/or farm supply cooperative.

Nonmember nonpatrons--Farmers neither holding membership in nor patronizing any marketing and/or farm supply cooperative.

Farms--Places from which \$1,000 or more of agricultural products were sold, or normally would be sold, during the year.

Farm classification--Farms classified by their main source of gross revenue. In this study, they are grouped into four classifications--cash grain, dairy, livestock, and other.

Appendix Tables

Appendix table 1—Commercial farmers' use of cooperatives for feed purchased, 1986

Category	Percent of total feed purchased					Commercial farmers ¹
	1-20	21-40	41-60	61-80	81-100	
<i>Percent in each category</i>						
Region:						
Northeast	6	3	5	2	23	38
Southeast	7	2	6	2	12	29
Lake States	8	4	4	3	32	50
Corn Belt	7	3	3	3	15	31
Northern Plains	6	4	7	3	21	41
South Central	5	2	6	3	15	31
Mountain	9	2	3	1	9	24
Pacific	3	(2)	2	(2)	7	13
Farm type:						
Cash grain	4	2	3	1	15	25
Dairy	12	3	7	5	23	49
Livestock	8	4	6	4	26	47
Other	4	1	3	1	7	15
Farm size:						
\$ 40,000 - \$ 99,999	5	2	4	3	18	33
\$100,000 - \$249,999	7	3	5	2	19	37
\$250,000 - \$499,999	9	3	6	2	19	39
\$500,000 or more	8	1	5	2	11	27
Operator's age:						
Less than 36	6	4	6	3	20	38
36 to 54	7	2	5	2	17	34
55 or more	6	2	4	2	18	33
Total	7	3	5	2	18	34

¹Totals may not add due to rounding.

²Less than .05 percent.

Appendix table 2—Commercial farmers' use of cooperatives for fertilizer purchased, 1986

Category	Percent of total fertilizer purchased					Commercial farmers ¹
	1-20	21-40	41-60	61-80	81-100	
	<i>Percent in each category</i>					
Region:						
Northeast	4	1	4	6	26	41
Southeast	4	3	7	2	21	36
Lake States	3	2	6	2	50	63
Corn Belt	4	3	6	1	32	46
Northern Plains	4	3	6	3	49	65
South Central	3	2	3	1	27	36
Mountain	2	(²)	3	(²)	25	31
Pacific	2	1	2	1	15	21
Farm type:						
Cash grain	3	3	6	2	37	52
Dairy	4	2	5	2	37	50
Livestock	2	1	5	2	37	48
Other	4	2	4	2	17	29
Farm size:						
\$ 40,000 - \$ 99,999	2	2	5	2	34	45
\$100,000 - \$249,999	4	2	6	2	35	49
\$250,000 - \$499,999	5	2	5	3	37	52
\$500,000 or more	6	6	5	2	21	40
Operator's age:						
Less than 36	3	2	6	2	35	49
36 to 54	4	2	4	2	34	46
55 or more	3	2	6	3	33	47
Total	3	2	5	2	34	47

¹Totals may not add due to rounding.

²Less than 0.5 percent.

Appendix table 3—Commercial farmers' use of cooperatives for chemicals purchased, 1986

Category	Percent of total chemicals purchased					Commercial farmers ¹
	1-20	21-40	41-60	61-80	81-100	
<i>Percent in each category</i>						
Region:						
Northeast	4	(²)	4	4	32	43
Southeast	6	2	6	2	20	36
Lake States	3	1	4	2	48	57
Corn Belt	5	1	4	1	30	42
Northern Plains	6	3	7	4	40	59
South Central	3	2	4	2	22	33
Mountain	5	2	3	2	26	37
Pacific	4	2	2	1	13	22
Farm type:						
Cash grain	6	2	5	2	34	49
Dairy	5	2	3	2	33	45
Livestock	3	1	5	2	37	47
Other	5	1	5	2	17	31
Farm size:						
\$ 40,000 - \$ 99,999	3	1	5	2	31	43
\$100,000 - \$249,999	5	2	4	2	33	46
\$250,000 - \$499,999	7	3	4	4	32	49
\$500,000 or more	7	2	4	2	23	38
Operator's age:						
Less than 36	4	2	5	2	32	45
36 to 54	5	1	3	2	31	43
55 or more	4	2	6	2	32	46
Total	5	2	4	2	32	44

¹Totals may not add due to rounding.

²Less than 0.5 percent.

Appendix table 4—Commercial farmers' use of cooperatives for seed purchased, 1986

Category	Percent of total seed purchased					Commercial farmers ¹
	1-20	21-40	41-60	61-80	81-100	
<i>Percent in each category</i>						
Region:						
Northeast	6	3	6	1	12	28
Southeast	7	3	7	1	16	34
Lake States	8	5	5	2	14	34
Corn Belt	10	3	6	(²)	6	25
Northern Plains	7	4	5	2	11	28
South Central	4	1	2	1	17	26
Mountain	3	3	2	1	9	18
Pacific	1	1	1	1	12	16
Farm type:						
Cash grain	8	3	4	2	9	27
Dairy	8	3	6	1	12	30
Livestock	6	5	7	1	12	30
Other	5	1	2	1	12	21
Farm size:						
\$ 40,000 - \$ 99,999	6	3	5	1	11	26
\$100,000 - \$249,999	7	3	5	1	12	28
\$250,000 - \$499,999	13	4	4	3	10	34
\$500,000 or more	7	2	3	1	11	23
Operator's age:						
Less than 36	8	5	5	1	10	29
36 to 54	7	3	3	2	11	27
55 or more	6	2	7	1	12	27
Total	7	3	5	1	11	27

¹Totals may not add due to rounding.

²Less than 0.5 percent.

Appendix table 5—Commercial farmers' use of cooperatives for petroleum purchased, 1986

Category	Percent of total petroleum purchased					Commercial farmers ¹
	1-20	21-40	41-60	61-80	81-100	
Percent in each category						
Region:						
Northeast	2	1	4	1	21	29
Southeast	1	1	3	(²)	11	17
Lake States	5	2	3	1	37	48
Corn Belt	2	2	3	2	34	42
Northern Plains	6	2	8	4	43	62
South Central	4	1	3	3	20	30
Mountain	8	3	2	2	28	42
Pacific	1	1	3	1	12	18
Farm type:						
Cash grain	4	2	4	2	36	48
Dairy	4	2	4	2	33	45
Livestock	3	1	4	2	26	36
Other	2	1	3	1	15	22
Farm size:						
\$ 40,000 - \$ 99,999	3	1	4	2	29	39
\$100,000 - \$249,999	3	2	4	2	30	41
\$250,000 - \$499,999	5	3	6	1	33	48
\$500,000 or more	5	(²)	2	2	24	33
Operator's age:						
Less than 36	3	2	4	2	31	41
36 to 54	4	2	4	2	28	39
55 or more	3	1	4	2	31	40
Total	3	2	4	2	29	40

¹Totals may not add due to rounding.

²Less than 0.5 percent.

Appendix table 6—Commercial farms by region and farm type, 1980 and 1986

Region	Farm type				Commercial farms ¹
	Cash grain	Dairy	Livestock	Other	
Thousands					
1980					
Northeast	2	34	4	7	47
Southeast	13	14	14	30	71
Lake States	28	49	9	9	95
Corn Belt	111	21	58	6	196
Northern Plains	47	8	32	3	90
South Central	18	5	17	18	59
Mountain	11	4	15	8	38
Pacific	12	6	7	22	46
Commercial farms ¹	243	140	156	102	640
1986					
Northeast	2	28	3	9	41
Southeast	10	10	13	32	65
Lake States	22	52	12	8	94
Corn Belt	84	22	47	6	159
Northern Plains	54	7	34	3	98
South Central	17	7	19	18	60
Mountain	12	3	14	7	36
Pacific	5	9	6	19	39
Commercial farms ¹	206	138	148	102	593

¹Totals may not add due to rounding.

Appendix table 7—Commercial farms by region and farm size, 1980 and 1986

Region	Farm size (Thousand \$)				Commercial farms ¹
	40-99.9	100-249.9	250-499.9	500 +	
<i>Thousands</i>					
1980					
Northeast	28	13	3	2	47
Southeast	42	18	7	3	71
Lake States	57	29	8	(²)	95
Corn Belt	106	55	30	6	196
Northern Plains	54	25	8	3	90
South Central	31	18	6	3	59
Mountain	21	10	5	3	38
Pacific	17	12	13	4	46
Commercial farms ¹	355	181	80	24	640
1986					
Northeast	19	17	3	2	41
Southeast	32	22	7	3	65
Lake States	46	36	8	4	94
Corn Belt	78	60	15	6	159
Northern Plains	51	35	9	4	98
South Central	32	20	6	3	60
Mountain	17	13	3	2	36
Pacific	14	11	6	8	39
Commercial farms ¹	289	214	58	33	593

¹Totals may not add due to rounding.

²Less than 500.

Appendix table 8—Commercial farms by farm size and farm type, 1980 and 1986

Farm type	Farm size (Thousand \$)				Commercial farms ¹
	40-99.9	100-249.9	250-499.9	500 +	
Thousands					
1980					
Cash grain	143	63	31	6	243
Dairy	79	44	14	3	140
Livestock	87	41	19	8	156
Other	46	32	17	7	102
Commercial farms ¹	355	181	80	24	640
1986					
Cash grain	97	82	20	7	206
Dairy	63	55	12	8	138
Livestock	79	47	15	8	148
Other	50	31	11	10	102
Commercial farms ¹	289	214	58	33	593

¹Totals may not add due to rounding.

Appendix table 9—Commercial farms by operator's age and farm size and operator's age and farm type, 1986

Category	Operator's age			Commercial farms ¹
	Less than 36	36 to 54	Over 54	
<i>Thousands</i>				
Farm size:				
\$ 40,000 - \$ 99,999	57	126	105	289
\$100,000 - \$249,999	48	107	59	214
\$250,000 - \$499,999	11	30	17	58
\$500,000 or more	6	18	10	33
Farm type:				
Cash grain	43	95	68	206
Dairy	38	64	36	138
Livestock	26	68	54	148
Other	14	55	33	102
Commercial farms ¹	122	281	190	593

¹Totals may not add due to rounding.

Appendix table 10—Coefficients of variation for expanded data, 1986

Category	Coefficient of variation			
	<i>Percent</i>			
	Members by farm size (thousand \$)			
	40-99.9	100-249.9	250-499.9	500 +
Region:				
Northeast	11.6	10.7	32.3	38.1
Southeast	11.4	12.9	22.5	34.7
Lake States	8.4	9.2	18.7	27.1
Corn Belt	8.4	8.9	15.3	22.7
Northern Plains	9.3	9.5	18.1	25.0
South Central	12.3	15.0	23.2	32.3
Mountain	13.2	13.1	23.4	22.7
Pacific	12.6	14.2	17.6	30.7
	Commercial farmers by farm type			
	Cash grain	Dairy	Livestock	Other
Farm Size:				
\$ 40,000 - \$ 99,999	5.8	6.0	6.0	6.4
\$100,000 - \$249,999	5.6	6.4	6.9	8.5
\$250,000 - \$499,999	11.2	12.3	12.5	12.2
\$500,000 or more	17.7	23.4	16.1	14.3
	Commercial farmer members by farm type			
	Cash grain	Dairy	Livestock	Other
Farm Size:				
\$ 40,000 - \$ 99,999	6.8	6.7	7.4	9.0
\$100,000 - \$249,999	6.8	6.9	8.8	10.7
\$250,000 - \$499,999	12.2	13.5	15.8	17.8
\$500,000 or more	19.4	29.3	20.7	19.6
	Operator's age			
	Less than 36	36 to 54	55 or more	
Farm Size:				
\$ 40,000 - \$ 99,999	7.7	5.6	5.9	
\$100,000 - \$249,999	8.3	5.5	7.4	
\$250,000 - \$499,999	16.6	10.0	13.6	
\$500,000 or more	23.1	14.4	17.3	

**U.S. Department of Agriculture
Agricultural Cooperative Service**

P.O. Box 96576

Washington, D.C. 20090-6576

NO. PRINTED _____ DATE _____
NEW _____ RPT _____ SL. REV. _____ REV. _____
REFER ACS PRICE NS

Agricultural Cooperative Service (ACS) provides research, management, and educational assistance to cooperatives to strengthen the economic position of farmers and other rural residents. It works directly with cooperative leaders and Federal and State agencies to improve organization, leadership, and operation of cooperatives and to give guidance to further development.

The agency (1) helps farmers and other rural residents develop cooperatives to obtain supplies and services at lower cost and to get better prices for products they sell; (2) advises rural residents on developing existing resources through cooperative action to enhance rural living; (3) helps cooperatives improve services and operating efficiency; (4) informs members, directors, employees, and the public on how cooperatives work and benefit their members and their communities; and (5) encourages international cooperative programs.

ACS publishes research and educational materials and issues *Farmer Cooperatives* magazine. All programs and activities are conducted on a nondiscriminatory basis, without regard to race, creed, color, sex, age, marital status, handicap, or national origin.